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**Section I**  
**ECONOMIC THEORY**



# SOME THEORETICAL AND PRACTICAL LESSONS TO BE LEARNT FROM THE ECONOMIC CRISIS CHALLENGES IN ROMANIA

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## Abstract

*The present article has as a main theme the complex mechanism regarding the evolution of world global economy crisis started back in 2008, and its present influence at the level of Romanian economy.*

*This paper herein will analyze, in short, a few of the theoretical, methodological, practical and implementation challenges brought about by the crisis in Romania, as well as the likely ways to prevent, mitigate impacts and resist to its shocks or to go back to the path of a sustainable economic growth.*

**Keywords:** *economic crisis, economic analyze, economic recovery process*

**JEL Classification:** E20, H12, G01

## Introduction

In contrast to the previous great depression, the current economic and financial crisis started in 2008 in the financial-banking sector due to the bankruptcy of Lehman Brothers Bank in the USA, and has had a very quick spill over impact at both national and international levels. Thus, in 2009, its **systemic nature** was evident **at an international scale**, where most countries were affected, directly or indirectly, by strong recession phenomena, imbalance and turbulent times.

Despite of a real and correct forecast based on pertinent causal analyses and accompanied by appropriate plans of measures and actions at all levels, the very-much-talked-about issue of exiting the crisis, also during the G-20 Summit meetings, has recently worsened due to the **spearhead of the sovereign debts crisis**, under the threat of a new crisis looming into the air; and this happens when a part of the world economy seemed to have partially recovered in 2010 and started going on a narrow but sure upwards road.

In September 2008, some decision-making factors in Romania were thinking that our economy would not be directly impacted by the crisis and that the decision to make a loan from the IMF, EU and World Bank in the amount of EUR 20 bns. was only a precautionary measure (the so-called 'protection umbrella' or 'safety belt'); later, such opinions, reassuring and comforting for the large public – uninformed – proved to be totally unrealistic!

The crisis in Romania has been even stronger and longer than in the other countries. Not even today, in 2012, the economy is not very promising, as the

specialists see the threat of the second wave of crisis, while many of the EURO zone countries are in danger of having the rating lowered from AAA, due to the pressure coming from the sovereign debts.

For the scientific economic research in general and in Romania, as a particular case, the current economic and financial crisis, firstly emerged in the financial-banking and then economic areas, followed by political and social circles, has triggered a series of new interpretations, paradigms and perspectives of economic thought and doctrines in terms of the causes, effects, fight and prevention against the systemic risk that economic phenomena and processes contain in a latent manner.

### **1. The fundamental cause of crisis – a deeper divide between the real and nominal economy**

Without the least intention to enter a scholastic dispute regarding the unequivocal or bi-unequivocal (!) relationships between the **real and nominal economy**, the top priority or importance of one or the other, I truly consider that the two facets of the same economic phenomenon should be linked in a **complex nexus of systemic and intrinsic connection**, where one cannot efficiently operate without the other; in other words, a consistent synchrony, relationship and compatibility in dynamics of the two interdependent manifestation types of economy represents a sine-qua-non requirement of the balance, sustainability, efficiency and profitability of the whole economic system at all levels of aggregation and operation.

As far as the literature in review is concerned, the expansion of the financial-banking system, with no support in the real economy and relying on a **pseudo-innovation of many of the financial-banking products**, in compliance with the desire and extreme greed, has made that the speculative vector, acceptable only within certain limits as a ‘must’ factor of economic growth, to have outgrown such limits long time ago and become ‘toxic’, thus affecting entire sectors and economies; likewise, it has accrued, obscurely and cynically, a major potential of imbalance, tensions and financial bubbles, via credits without warranties and coverage, subprime credits, by apparently favorable multiplications of the transactions on the secondary capital market and predominantly speculative financial placements (hedging, endorsements, etc.).

Certain famous **rating agencies** have also contributed to the above circumstances, unable to realistically evaluate and timely warn about the critical economic and financial situation of many banks and systemic institutions or of a major importance for the proper course of the national and international economies.

I truly consider that the momentum of the nominal, financial and monetary economy, with no direct and efficient support in the real economy, will always trigger phenomena of destabilization in economy and society, toxic spill over effects by generating negative externalities (external marginal costs) or diseconomies. The corrective taxes Pigou, made available by implementing the **polluter pays principle**, up to the integral compensation of the induced prejudice

to third parties, may constitute one of the remedies, similar with the Pigou mechanism that was initiated for and implemented in the environment economy. Unfortunately, the ‘polluters’ (guilty ones) in the nominal economy, whom have started the crisis, are hard to identify, let alone the high level of difficulty to establish the damage in time and space of their negative externalities, at both national and international scales. For this reason and for others targeting their economic and political force, they will not have to bear the crisis costs, but rather the taxpayer ‘at large’.

Up to now, an effective solution worldwide (and not only) seems to be a ‘goal’ that the suggested mix of economic policies, instruments and mechanisms of fighting and recovery has only managed to brush it lightly – in theory, methodology and intention – based on restructuring and partial debts exemption, budget austerity measures (transparent and careful), a higher efficiency of the systemic risk management, etc.

All these measures, mostly known and implemented, have not represented an antidote against crisis recurrence and recessions but they are rather ‘palliative’, which gave away when rare, difficult to forecast problems occurred (i.e. economic and financial crisis, earthquakes, flooding, epidemic diseases or other extreme meteorological phenomena), considered ‘black swans’.<sup>1</sup>

The pragmatic-applied challenges of solving the present crisis target the financial stability funds at the EU level and EURO zone, the financial aid from states, granted to the banks in difficulty, a series of micro and macro prudential measures of the banking systems, consolidation of the supervision means, control and monitoring of the financial sector inevitably generate a series of controversies related to the **losers and winners** of crisis, the operational behavior of implementing business ethics, responsibility and involvement of the rich ones, etc.

In my opinion, such measures may be completed with others targeting the stock and extra stock markets, mainly by the stimulation of the **initial public offerings** (IPO), a market which is very low in Romania.

The initial public offerings make a direct connection between the real and the nominal markets – it is not about the predominance of the secondary capital market that relies on speculations ‘à la hausse’ and ‘à la baisse’, triggering transactions of the ‘securities’, with no positive effect upon increasing the real added value, but an impact on the nominal market that bring about higher inflationist pressure, beyond certain acceptable limits, necessary and sufficient, for a sustainable economic growth.

There cannot exist a ‘prosperous’ secondary market of capital in Romania with a very weak primary market, episodic, non-existent, as in other countries with an emergent or developing economy.

The volatility of the capital market, mainly the secondary one, was obviously marked by the activity crash of world stocks, including BVB (Bucharest Stock

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<sup>1</sup> See Taleb Nassim Nicholas (2007/2010), *The Black Swan. The Impact of the Highly Improbable*, New York, Ransom House and Penguin, completed with the essay ‘On Robustness and Fragility’ in second edition in 2010.

Exchange) in 2009-2011; the stock crash was so strong in Romania and other countries that the stock operation was suspended for certain intervals of time.

The issue of the secondary stock market, the speculative securities, is not a new one. The Romanian economists have been analyzing their negative impact upon economy and society since the 19<sup>th</sup> century – Mihai Eminescu, the great poet, was one of them. His ability to look into the economic, social and forecasting phenomena has been confirmed by famous names of the Romanian economic science, namely Mihail Manoilescu. M. Eminescu<sup>2</sup> was not at all against the primary capital markets (initial public offerings – IPO), which relied on ‘naturally made-up’ prices and are proportionate with the ‘enterprise output’. On the other hand, he considered that the stock transactions on the secondary capital market are not lucrative but only for the people who hold important money funds and can influence the stock assessment to value as much as they want, even though the rate they impose is found in a total contradiction with the company economic condition (whose stocks are the object of transactions). Most frequently, when losses occur, this situation leaves their financial force intact or almost untouched<sup>3</sup>.

Now, in the context of the systemic crisis, a large part of the financial and banking system and of the secondary capital market had lost contact with the real economy and was expanding in virtue of an inertia of **undue enrichment** in the nominal economic world, eager to become rich quickly via artificial securities.

Currently, it is confirmed at large scale the Eminescu’s statement that the stock market is as much interested in spreading the taste for gaming, quick money at someone else expense, dirty transactions, contempt for the intrinsic value of business. The speculative stock activities withdraw the money from real merchandise transactions, from companies making real goods to throw them into future companies with a zero production<sup>4</sup>.

I consider that one of the measures required for recovering the economic situation is **to reduce the volume of speculative transactions on the financial capital market**, of the securities, complying with rigorously set criteria. Thus, these measures may target the discontinuation of the stock activity on the secondary market for a certain period of time, including by implementing certain limitations or forbidding the ‘**naked short-selling**’ transactions for an undetermined time, at some companies in the banking and financial sector.

The specialists in Germany, for instance, bring arguments and put pressure to **ban at the European level** the ‘naked short-selling’ share transactions, governmental shares and the ‘swap’ contracts on credit risk. For the short-selling operations, a share loan will take place, where the investors sell and hope that their prices will lower so that they will be able to purchase them at a smaller price and return them to the ones they borrowed them from. Practically, for this transaction, the investor bids on a lower share price. Even though many specialists believe that

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<sup>2</sup> Eminescu M., „Creditul mobilier și jocul de bursă”, *Opere*, vol. XII, Critical edition by Perpessicius, Romanian Academy Publishing House, Bucharest, 1986, p. 276-283.

<sup>3</sup> *Ibidem*, p. 275.

<sup>4</sup> *Ibidem*, p. 276.

such operations will not be able to stop the speculative market for too long and will maintain the share prices relatively constant for a short time, it is still a 'win' situation to distribute that money towards the sector of real economy, lucrative indeed.

Another issue to be taken into consideration by the decision makers in the real and nominal economy and the theoreticians is in regard to the order or viable measures, healthy, of an optimum balance between the **profit rate and economic growth** – as indicators that reflect the real economy and between the **interest rate and inflation rate** – as signals coming from the monetary and financial economy.

A normal, effective and healthy interposition of these indicators requires **the average interest rate be lower than the average profit rate and not vice versa**. How large should be the difference between the size of the two indicators represents a complex issue that depends on the level of economic and social development, specific features and condition of the national economies, the size of risks and vulnerabilities of the respective economy.

A wide research area for economists and not only, derived from the current crisis, is the one regarding the fight against the accumulated effects of the economic, financial crises, of environment, supply and energetic sectors, as an extended issue of interference between real and nominal, in economy and society, by paying a special attention to the importance of economic 'real', as a support for the nominal economy and, on the other hand, the positive feedback with growth force or negative with a force of cancellation, meant to flatten imbalance and tension in the nominal economy.

The multiplication of the adverse contagious effects of the negative externalities in the nominal economy that exceeded a certain threshold of tolerance has represented the main cause of crisis unlatching. Unfortunately, the multitude of the **early warnings** (clignotants) of various models and risk management schemes has not been successfully applied up to now, in order to have a more rigorous and clearer warning in due time, in connection with the imminence and extension of the procedure in recession and economic and financial crisis.

## **2. The 'natural' rate of unemployment and the emergency level in youth unemployment**

It is well-known that the crisis phenomena mainly result into the reduction (contraction) of the activities in various economic and social sectors which trigger the increase in number of unemployed people, especially for youth up to 25 years of age.

The ideal criterion or principle of 'full employment' or of the 'natural' unemployment rate has been and still is a 'moving target' for the entire decision making in the market economy, relying on practical experience, without wasting human capital. What worries is the high unemployment among young people, as crisis has amplified this phenomenon which the competitive free market has not been able to face, as there is the need for an efficient partnership with the state.

Table 1

**The unemployment rate in Romania versus other EU member states  
for June 2010 and June 2011**

Country	Young unemployed under 25 years of age		Total of unemployed people	
	June 2010	June 2011	June 2010	June 2011
<b>Romania</b>	<b>22.0</b>	<b>22.8</b>	<b>7.2</b>	<b>7.5</b>
Bulgaria	22.3	27.3	10.1	11.4
Czech Republic	18.6	16.7	7.2	6.5
Ireland	27.3	26.9	13.6	14.2
Greece	31.9	38.5	12.2	15.0
Germany	10.1	9.1	7.1	6.1
Spain	41.5	45.7	20.2	21.0
France	23.8	22.8	9.8	9.7
Italy	27.5	27.8	8.3	8.0
Hungary	27.7	24.8	11.3	9.9
Poland	23.8	23.6	9.6	9.9
Portugal	27.3	26.8	12.1	12.2

*Source:* Eurostat, Financiar newspaper, August 3, 2011, p. 10.

Even though in Romania the unemployment rate is lower for both total and young people in comparison with other countries, we consider that this rate is still high mainly for this category of population, which means not only a waste of human capital and poor living conditions, but also an additional factor of delinquency, social tensions, unemployment and leaving the country in search for a job (brain waste).

The fact that the young labor force leaves Romania, mainly talented graduates and young researchers, is an extraordinarily great “brain” loss for this country, which deepens the difference between the potential and real GDP here.

The big challenge of solving exiting crisis problems is not large, massive layoffs, but creating employment and new jobs that will counteract the temptation of such layoffs and the damaging phenomena of crisis.

The sharp and massive layoffs have turned into **overloading the existent staff**, so that their labor efficiency and work results have been less competitive.

A series of adverse effects emerged, due to the lack of coherence in lowering wages costs and discontinuation in the bonification system, less company cars and money spent for travelling abroad, training programs, less frequent attendance to conferences and international events or renegotiation for contracts and agreements.

To avoid as much as possible to cut down the salaries, mainly in the sectors less paid, the implementation of **as many as possible measures of non-financial incentives** in institutions and companies could be realized, which will increase the motivation of the employees, as such: improvement of the professional skills via at-work courses and seminars; job rotation; flexible schedules; a regular feedback concerning the employees performance; a nicer work environment,



encouraging rather than critical; internal competitions on non-professional topics; attracting employees in programs of social responsibility of companies; organizing ‘brainstorming’ meeting to debate on how to raise efficiency and exit crisis.

In this context, the measures and policies of inserting young people into labor market is one of the core topics that the decision making factors should take a good look at, in order to provide solid support to the sustainability of the economic growth and inter-generation cooperation.

Similarly, the positive effects that the **policy of promoting ‘active ageing’**, policy that involves work opportunities for the over-65 people, mainly the highly qualified, which has made the EU place it on top of its agenda and of other European countries’. Another reason is that the young employed segment does not interfere with the positions for the older segment, in point of view of the difference in job levels and skills.

Downsizing is one of the easy and shallow ways to increase, on short-term, the apparent labor productivity. This can entail serious long-term consequences, for economic take-off requires large and highly-qualified workforce. The unemployed, particularly the long-term ones, either fail to meet the requirements of an ever-demanding labor market or they find a job abroad; therefore, unemployment results in short, medium and long-term imbalances on the national job market. Another consequence of the crisis is hiring ill-qualified or non-qualified staff, to replace the highly trained workforce (see the medical staff shortage and the substitute teachers taking the place of the regular teaching staff in the rural areas). For the managers making lay-offs and dramatic pay deductions or cuts in the recruitment and training budgets, the post-crisis recovery process is rather slow, for it is easier to restart an engine working at its minimum capacity than a completely turned-off one.

According to the human resource specialists from multinational Romanian companies<sup>5</sup>, a new potential crisis wave hitting our country in 2012 is likely to follow the first one, outburst in 2008, when, as a result of emotional approaches, a general cost-reduction measure is implemented, **without having a clear strategic perspective on the medium and long-term consequences** of such a step.

### **3. Reconsideration of the convergence dynamics development and of the economic, social, technological and environmental gaps reduction**

The complex and concerning issue of convergence and of theoretically, methodologically and especially metrically reducing the interstate economic and social gaps is based on various economic and mathematical models, relevant for the ex-post analysis, yet less or non-reliable forecast instruments under the crisis or post-crisis circumstances. We are talking about the **time duration in which a business process recovers from a micro, mezzo and macroeconomic downturn**, the intensity and dynamics of the downturn and of the recovery process in various economic sectors, usually suggestively represented by the letters V, U, W and, in

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<sup>5</sup> See Ziarul Financiar, 15 of August 2011, page 9.

the least fortunate case, by L. Additionally, the economic growth theory takes the “J” or “U” shape rather at micro and mezzo than macro levels.

We present below the variations of some anti-crisis indicators and measures in order to see the effort / outcome ratio.

Table 2

**The impact of the economic crisis in October 2011**

Year	GDP	Budget deficit	Exports	Non-resident reimbursements	Foreign direct investments (FDI)
2008	137 bn Euros	5.4%	34 bn Euros	8.6 bn Euros	9 bn Euros
2011*	120 bn Euros	4.4%	43 bn Euros	4 bn Euros	1.5 bn Euros

\* Preliminary estimates.

- Although at the end of 2011 the GDP value increases by +2.5% compared to the previous year (the final quarter of 2011 records a decrease by -0.2% in the GDP, as opposed to the third quarter), the fall in the GDP recorded in 2009 and 2010 – matching the 2005-2006 values – cannot be redressed. The catching up and leapfrogging-based **economic recovery process** remains a challenge which is not unfortunately taken into consideration, in Romania, in a satisfactory way.

**Romanians working abroad** financially provide for their families by approximately 50% less, compared to the 2007-2008 thriving interval, following the economic crisis hitting the countries where they work. We doubt that the above-mentioned level will be reached in the future, for most immigrants have settled abroad with their families, while the rest have returned home for not finding employment overseas. The amounts of money sent by those working abroad are on the decrease.

The **foreign direct investment rate** has dropped by almost 4 times following the unfavorable economic environment generated by the crisis hitting both the host countries and Romania. Having in view the situation in Romania and in other countries, we shouldn't overlook that in the target country the FDI rate **reaches a limit or saturation level**, to gradually drop in time, following either greater profit opportunities envisaging in other countries, or increasing competition from domestic capital<sup>6</sup>.

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<sup>6</sup> We don't want to minimize the obvious positive impact of FDI for the host country; however, we cannot overlook some negative aspects that must be considered when making strategic decisions.

Pursuant to Donato de Rosa, senior economist of the World Bank (Bursa, 20 October 2011), between 2003 and 2008, according to the Bank's statistics, the added value of foreign companies in Romania increases on average by only 2.8% / year, while the domestic companies record a 5.9% rise, which proves that the latter's contribution to the GDP increase is significantly higher than the former's. In some countries from Central and Eastern Europe, the foreign capital companies record various added value rates: 4.3% in the Czech Republic, 12.4 in Poland and 19.1 in Slovenia.

The only sector reaching, between 2010 and 2011, the value recorded in pre-crisis 2008 is export (43 bn Euros vs. 34 bn Euros); in this case too, we have to analyze to what extent this sector drives the economic sustainable development in Romania, given that increased exports do not reflect in an increased GDP (?!), since most of them derive from foreign capital companies seated in Romania. According to our statistics, between 2008 and 2011, the volume of goods and services exported by foreign capital companies is lower than the volume of imported goods and services, therefore yielding in a trade deficit. This doesn't lead to an increased favorable **external balance and to the national sustainable development**.

In Romania, the crisis leads to a fall in the GDP per capita to a greater extent than in most EU member states, which hinders the **nominal convergence process**, although the GDP value vs. the EU-27 average is 26% in 1999 and 42% in 2008, being on the increase in that interval.

Romania overcoming the economic crisis in 2012 remains an arguable issue, for some partner EU member states seem to experience a slowdown in the economic growth process. Through the spillover effect, the EU member states cooperating with these countries are threatened to face bankruptcy.

According to the estimations of some specialized institutions, in the past two years, the credit risk indicator goes up, yet the situation is still stable. A shallow approach of or neglecting the government debt issue in Romania can entail serious consequences, given that the dynamics of this indicator progresses at a rapid pace under the unforeseeable influence of the domestic and foreign economic environment. If in early 2011 the credit-default swap (CDS) for the Romanian state bonds is 2.0-2.5%, in the September-October interval, the CDS quota rises to 4.5% in Romania, 1.5% in Bulgaria, 3% in Poland and 5% in Hungary. Although we have relatively sufficient foreign-exchange reserves, we mustn't overlook the low capacity to pay the foreign debt on medium and long term. This national trend is not very auspicious, especially if the increasing burden of short run external debt is taken into account.

The crisis entails significant gaps between Romania and the developed countries; this requires a well-defined **economic recovery and convergence strategy**, in terms of both nominal and **real convergence terms**. Focusing on real convergence contributes to a more efficient real/nominal economy correlation<sup>7</sup>. A comparative analysis between Romania and the other EU member states reveals deeper economic and social gaps rather than their relative and absolute reduction.

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<sup>7</sup> Moreover, we need to pay more attention to this aspect, for the nominal convergence indicators between Romania and the EU-27 average rate indicate a favorable climate for our country until 2008, to face the crisis one year later.

#### 4. The protection of new industries (infant industries)

One of the oldest theoretical, methodological and practical debates on the industry-related strategy covers the ways to stimulate **new, young or emerging industries**, known as “infant industries”. Despite of correlating this term with the “life cycle” concept, the national industry-related strategy is not analyzed in the context of a “life cycle” model. More precisely, the potential of new business entities, especially of those activating in top scientific and technological fields, to bring significant changes is overlooked.

Industrial development in Romania has been a long-addressed issue ever since the 19<sup>th</sup> century in the works of prestigious economists of our country, such as:

- P.S. Aurelian<sup>8</sup>, who sees development as a system of the small and medium-sized industry in Romania, without ruling out the possibility of establishing large enterprises as well;
- A.D. Xenopol<sup>9</sup>, who promotes the large industry as “a system, from the beginning” and, additionally, he fosters the development of small enterprises;
- D.P. Mațial<sup>10</sup>, who encourages the development of large and small enterprises simultaneously.

In terms of supporting the development of new industries, we need to focus on how to succeed in doing that. Considering that “the national output cannot keep up or even exist without protectionist measures”<sup>11</sup>, Eminescu outlines: “The fruit of the national industry must be raised first, protected from the fight with the cruel outlandish industry and not until he grows up and becomes strong, will we let him compete under the free trade regime”<sup>12</sup>.

We reproduce a fragment from the economic prose of our great poet to show his visionary and rational capacity, confirmed so far by the economic practice on the principles and criteria of industry-intended subsidies.

According to Eminescu, the funds are meant for young industries, as a temporary protection means, and as soon as they reach their development stage, they can freely face the competition on the national and international markets. This truth is still fully valid to date and implemented in new ways more or less transparent by the major part of developed countries.

On the current crisis background, some companies receive funds not only in their early stage, but also in crucial situations, if they hold an important weight in

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<sup>8</sup> Aurelian P.S., *Cum se poate fonda industria română față cu libertatea comerțului de importațiune*, in Oe-A, p. 214-217.

<sup>9</sup> Xenopol A.D., *Studii economice*, Oe-X, p. 85-86.

<sup>10</sup> Mațial D.P., *Oe-M*, Studiu introductiv de Costin Murgescu.

<sup>11</sup> Eminescu M., „Alexandria, confessing...”, *Timpul*, 30 iulie 1882, in *Opere*, vol. XIII, Edit.cit., p. 155.

<sup>12</sup> Eminescu M., „Influența austriacă asupra românilor din Principate”. *Convorbiri literare*, 1 august 1876, *Opere cit.*, vol. IX, p. 167.

the social and economic picture, according to the “too big to fail”<sup>13</sup> principle. Unfortunately, in Romania’s transition economy such a principle fails to be implemented for large, systemic national enterprises – most of them foreign capital companies – subject to division and useless privatization with so-called foreign strategic investors. The failure to understand and, consequently, to implement the industry-intended funding strategy lies with the stakeholders, who are either ignorant, or ill-intentioned and serve the interests of foreigners aimed at eliminating the potential competition for their goods exported to the Romanian or other markets.

The economic protectionism, in general, and the trade and industry-related protectionism, in particular, gain new dimensions on the crisis background, having in view that the free trade promoted by the World Trade Organization is basically accepted in every state.

Presently, protectionism does not primarily result in tariff-based restrictions or state aid funds, but in non-tariff restrictions covering quality, technological and environmental standards or dumping practices. To the best of my knowledge, Romania hasn’t initiated an antidumping procedure, although we would have had all the reasons to do that, with respect to many competitive imported goods seriously affecting our domestic goods and services of various economic branches.

Most specialized studies show the way in which the industry-related strategies obviously depend on the **input and output dynamics**. Practically, a technology adoption model, in which the companies make forecasts on the technological decisions protection, is developed. Without promoting the permanent industry protection which may **induce an early technology adoption**, yet may result in the firms unlikely to adopt a new technology, we cannot overlook the motivation for temporary protection and funding within certain sectors and enterprises promoting innovation and scientific progress, generators of positive externalities. Experts state that temporary protection results in a faster technology adoption, unlike permanent protection which reduces the likelihood of the companies adopting technologies.

In case of industries characterized by a greater number of firms, the protection strategy does not change the technology adoption rates; it increases the net output likelihood.

With respect to the new industries, we emphasize the need to **elaborate a national reindustrialization strategy**, having in view that according to the latest statistics, industry, in general, and **manufacturing industry**, in particular, have experienced a rapid recovery potential, contributing to an increased GDP and to Romania coming out of the crisis. The expansion of the services sector in transitional Romania, under the post-industrial development thesis, translates, to a great extent, in an exacerbated services “pseudotertialization”, in the development of the super-nominal economy *per se*, characterized by speculative and inflationary pressures, failing to meet the real needs of the primary and secondary sectors. According to the statistics, between 2009 and 2011, only a minor part of the

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<sup>13</sup> Too large to go bankrupt.

tertiary sector contributes, to some extent, to Romania overcoming the crisis, while some of its major components have a negative impact. High wages and profits in some branches of this sector contrast with its contribution to the added value of the goods and services of real economy. In many cases, the selling price is a few times higher than the manufacturing cost, both on domestic and international markets (in the case of so-called transfer pricing), because of some speculative agents following the “profit searching” principle.

## 5. Inefficient shock dimensions of anti-crisis measures

During the crisis, all states turn to **austerity measures** resulting in wage freeze or cut, downsizing in both public and private sectors, fiscal facilities concurrently with income tax, wealth tax and the like.

A comparative analysis between Romania and the other EU member states in terms of the anti-crisis measures reveals the following:

- Romania implements **drastic steps**<sup>14</sup> to cope with the crisis: considerable wage cuts in the public sector (by 25%) along with cutting some benefits and bonuses (premiums, food vouchers, PhD-related compensation and the like), the value added tax rising from 19% to 24%, tax on pensions by 16%, increased price for drugs and the like; all of the above hinder the economic sustainable development, even if the budget deficit is, to some extent, temporarily redressed;
- wage cut and increased duties and taxes are applied equally, undifferentiated, linear for all employees or taxpayers, without assessing the social and economic contribution of the persons from various professional categories in terms of sustainable development, of affecting the quality of life and of solvency; such a pattern, reminding us of the “flat taxation myth” – relatively high for the small producers – hits especially the purchasing power of most low and middle-income earners, entailing increased poverty, tax avoidance, social tensions and discontent, in a nutshell, social polarization.

At least until now, the effects of the politicians’ shock measures of the anti-crisis policies undertaken by the Romanian decision makers did not have as result the wanted effect, on the contrary, they prolonged the turbulences and the economic and financial imbalances and they reduced the standard of living, they disrupted the base of the durable economic growth.

A lot more justified and efficient would have been the differentiation of the measures in the field of the fiscal and salary policies, in the sense of their **adequacy to the specific of each social, professional and income policy, taking into consideration the positive effects of the labour tax reduction and the**

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<sup>14</sup> As a rule, any wage cut or tax increase measure is based on factors generally entailing 5%-7% deductions, at the most, not impacting upon the demand as a wage cut by 25% would, on one hand, and is implemented to test the population’s bear ability, on the other.

**increase of the wealth tax and Eco tax.** There is also an interesting and realistic measure in the field of the wage system: the increase of the minimum wage to 500 Euro/month, with the purpose to increase the consumption and investment savings and, therefore, the products and services demand. The financial insurance of such a measure could be found in the margin reductions of unjustified profits or in a more rigorous differentiation of the income taxes, as an answer to the stereotype objection “there is no money”!

The international experience regarding fiscality has shown that the great majority of the countries apply the differentiated, progressive tax and not the flat taxation<sup>15</sup> for the simple reason that the first offers greater possibilities of adjusting the taxes to the promotion of certain sectors and branches with strategic importance for the security and insurance of goods and services of vital importance for the population or with a strong propagation effect for the modernization and efficiency of the economy, as well as for the increase of the welfare. Taking into consideration that Romania will adopt the provisions of the EU “Fiscal Pact”, which anticipate a target of 0.5% structural deficit of the GDP, the need to overcome the recession is directly linked with the dimension (power) of the automated stabilizers, which depend on the tax system and share of the governmental sector within the GDP. The stabilizers initiated in Romania are weaker in comparison with other EU countries, such as Denmark, the Netherlands, Sweden and Finland, where taxation has a strong differentiated progressive character.

Therefore, the much-praised flat taxation in Romania proves to be contradictory with the budget imbalance reduction measures envisaged by the fiscal pact.

On the other hand, the tax installments must be underlain both from the point of view of their optimal dimension and from a social and economic point of view. It seems obvious and justified that those economic agents or those persons who **use or deteriorate more the environment factors**<sup>16</sup> and who generate marginal external costs (insufficiently analyzed within the Romanian theory and practice), must pay higher corrective taxes. Such taxes try to use the market mechanisms, making compatible the **private optimality or that of the competing market with the social optimality**, in order to promote equity, solidarity, inclusion and social equity.

The end of the crisis needs a better use of the **mechanism, of the so-called subsidies or the support of the positive externalities** (the marginal benefits

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<sup>15</sup> Without considering that one or the other tax method is a panacea (or that it would be perfect!), the progressive tax offers more promotion possibilities of the durable development policies from the economic, social and environmental points of view, as well as of structural budget deficit recently imposed by Fiscal Treaty signed by EU countries at the beginning of March 2012.

<sup>16</sup> By environment factors, we do not understand only its basic components (air, water, soil, subsoil), but also the anthropic capital, meaning the local, regional and national public infrastructure goods, the environment being the most comprehensive public good.

disseminated to third parties), in the case of the economic agents with positive externalities (environment, RDI, health, education etc.). The subsidies generally represent an economic policy instrument practiced currently within the western economy, under the condition that these are **affordable from the point of view of the financial resources, rigorously targeted and efficient (with a high probability** for the desired effect) and granted for a limited period of time (temporary). As an example of subsidies inefficiently granted, we mention the type of financial aid the farmers have benefited from, without any established conditions, commitments, correct production schedules. The state aids and the facilities granted to certain Romanian and foreign investors fall into this same category, in the case of the privatization of the state companies (some of which of great dimensions), which by post-privatization investment programmes committed themselves to respect the achievement of certain investment, production, personnel, environmental indicators. In reality, a lot of the commitments and provisions have not been accomplished and, consequently, the state aid or the advantages (which, in some cases, consisted in hundreds of millions of Euros) were inefficient!

The cancellation of the privatization contracts, their renegotiation during several rounds meant to Romania's economy a huge loss by the marginal external costs generated, including the law expenses for establishing the ownership. To these costs, we add the ones with the foreign consultancy companies for the privatization process or other specialists involved in the process. The increase in the efficiency of the institutional capacity of the timeliness and the specialization of the Romanian justice still is a major issue for Romania, with new peaks during the crisis periods.

One of the major flaws of the laws on many levels is exactly the lack of adequate preparation, solid bases, and careful analysis of the impact of different policies over the economy during different periods. It is exactly what the Nobel laureates in economy have approached in their studies; in 2011, J. Sargent and C. Sims talk about the means to determine the effects regarding the shocks of the market and other political factors upon the macro-economic process.

## **6. The public-private partnerships**

The current economic and financial crisis demonstrated once more, one on hand, the inconsistency and the unilateral character of the theories regarding the infallibility of the free market mechanisms and of those regarding the "walk-on" economic role of the state. The contemporary economists with international authority express it even tougher, in the sense that the current crisis threw to the history bin the neo-liberal monetarist theses, which, for a period of time, were accredited without reserves, with panacea abilities within the market economy.

I do not wish to make an analysis of the relations established between the state and the private sector, between 2008 and 2011, when many of the developed countries made major capital investments in order to try to save banks and other financial institutions in functional difficulty or when the state performed some sort of temporary "nationalizations" in the case of certain banks. I wish, nevertheless, to



highlight the fact that during the economic crisis, the economic role and intervention of the state must intensify. We are talking about a state with professional decision makers and performers and not about one affected by corruption and the incapacity to manage the crisis within the financial and banking system and the production and distribution system of public goods and services or private ones with strategic importance (food security, health, education, occupancy, etc.).

The crisis brought into attention the fact that it is very important to carefully analyze, in the case of the Romanian economy, the sense and opportunity of the financial aid given by the state to the banks in virtue of the statement: “too big to fail”. In such cases, it was possible and justified to defy the sacrosanct law of the functional market economy regarding the subsistence of only the profit-making firms. As mentioned before, during the transition period, the big state companies and banks which were, at that time too big to fail did not benefit from such treatments in Romania. Systemic entities were destroyed by insolvency, bankruptcy, division, partial privatization with national and foreign strategic investors, some of whom proved to be broke or incapable of redressing the bought from the state companies.

In many situations, the Romanian state invested amounts a few times bigger than the ones gained after the privatization in certain companies in the public sector in order to bring them back afloat, which we cannot consider to be a profitable business. The motivations of an “extra-economic nature” invoked by the decision makers, more or less transparently, directly or indirectly, in such cases did not generate compensations and equivalencies valid qualitatively, or in terms of value, money, for the economy and the people’s welfare, therefore the measures or pressures of other nature than the economic-financial one represented some sort of opaque “black box” that served other purposes and not Romania’s.

The crisis should also bring into discussion the issue of the bankruptcy effects quantification or that of rescuing a bank in difficulty, comparative with the same bankruptcy situation of a big company of national importance in the industrial field or other sector. Is it always true that the bank is more important than a big company within the production sector?! Obviously, it is necessary to perform a cost/benefit analysis both in the financial-banking intermediaries sector and the material production sector. I doubt that the bankruptcy of an automobile factory with a weight of 24% within the export of a country, for example, is less important or harmful than the bankruptcy of a bank, regardless of its size. Consequently, it is necessary to decide bankruptcies and company rescues, during the crisis periods, considering serious analysis and not temporary interests, personal interests or group interests imposed extra-economically by power within or outside the country. Many specialists wonder why banks receive so much attention from the state during crisis periods, while other companies from the industrial sectors do not benefit from the same treatment. Is a financial intermediary more important than a large industrial producer?! The answer must be well argued.

It is often neglected that the crisis imposes a tight collaboration between the state and the economy within the **public-private partnerships**, but also within the private-private and public-public ones. Reality proved that, during the crisis

periods, the state must have the capacity to propose solutions for the exit from the crisis, following the Schumpeterian process of “creative destruction”, which is not valid only for the technological progress, but for other activity fields as well, including the institutional one.

The shrinking of the state from the economy during the “quasi-normality” periods of Romania’s transition towards the market economy was a measure imposed due to the fact that, practically, a private sector did not exist in the country’s economy and it had to be created. The quasi-total backing of the state from the economy, under conditions of crisis, seems to be a totally uninspired measure. The crisis period needs the institutional capacity and the public information at superior quantitative parameters, in order to contribute directly to the exit from the crisis, through appropriate policies.

Regarding the relation between the public and private economic sectors, we consider completely inadequate the use of the term privatization when a “systemic” asset of the Romanian state is sold to another state, leaving the public Romanian sector for the public sector from another country.

There are, however, abnormal situations in my opinion, which have practically proved the **incapacity recognition of the Romanian state to manage certain companies it had to manage and, implicitly, the capacity of other states**. The natural question is: to what extent can we talk about a privatization or a transfer from Romania’s public sector towards the public sector of another country?!

On the other hand, the experience of other states showed that the state is, in certain cases, a good manager, guarding for specific needs of certain entities within the banking system or other sectors delivering public goods or systemic importance ones.

The sale of the minority stock package of the state from companies mainly private in Romania, when the crisis affects the level of the prices, cannot be justified in terms of durable development, because the low prices the state obtains by selling minority packages erase the possibilities to earn state incomes on the long term, and the state would need this kind of incomes. This manner to think and act under pressure, with short-term visions, for the betterment of a critical situation is totally detrimental to the insurance or permanent income sources of the state on the medium and long terms.

Another field where the tight cooperation between the state and the private sector is needed would be **the external balance of payments, of the public and private debt, internal and external on the short, medium and long term**. The crisis demonstrated that the thesis according to which the debt in the private sector has nothing to do with the public debt is wrong and injurious. There is no situation in which the public sector works fine because it has a small debt, when the private sector is almost bankrupt and vice versa. There is a bi-univoque connection between the public and the private debts, taking into consideration the fact that any private activity, by its positive or negative externalities, interferes on the long term with the public sector and the other way around.

Moreover, the private debts guaranteed by the state involve the state directly. If the private company granted by the state goes bankrupt, the state has to pay! The partnerships should function on the short, medium and long term, especially regarding the debt financing sources, the real payment capacity. The debts that are huge and unclear from the efficiency point of view, made during a political mandate of 4 years must be paid by others in the future. We are talking about the lack of inter-generation ethics, the ignorance of the economic and social development sustainability, but also about lack of accountability and social responsibility of decision makers.

## 7. The relation between FDI and the durable economic growth of Romania

According to recent statistical data, in 2011, FDI reduced to half in comparison with the same period of 2010 and in 2010, the reductions of FDI were of 50% in comparison with 2009, after a sensible decline in 2009 in comparison with 2008. This unfavorable trend is a consequence of the negative impact of the crisis, externally and internally, and it obviously imposes a reassessment of the means to attract foreign investors and of the reduction of their “volatility”, as it is a known fact that, for many reasons, they can leave the country looking for higher profit in other countries, leaving very negative effects upon the economy of the country of assignment.

Currently, Romania has an open economy, FDI hold a **key position, dominant in most of the economic sectors, reaching over 90% in the banking system** and over 70% in the industrial field and the import-export one.

Under certain limitations and conditions, the foreign direct investments are a factor whose contribution to the development of the country is important, especially due to the efficient management, the economic and financial performances and technology transfer, the know-how, etc. The crisis proved that in spite of the foreign investors’ performances in Romania, **their favorable impact on the economy was not enough to lead to the end of the crisis!** Moreover, some of the important foreign investors have left or intend to leave.

According to the analyses upon the FDI firms in Romania<sup>17</sup>, the following aspects relevant for the challenges generated by the economic and financial crisis have resulted:

- **the biggest weight (over 43%) of the total FDI** amount was held, in 2010, **by the financial intermediary services, the trade and the services for the companies**, that is the tertiary sector whose contribution to the GDP is mainly based on speculative activities with volatile features, on the short and medium terms and that make financial profit without an equivalent in the real economy;
- in 2011, the total FDI amount in Romania was 1.92 billion Euro, 13.6% less than in 2010, close to the level of 2003, when the value amount of FDI

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<sup>17</sup> See: Zaman Gh et. al (2011), *Impactul ISD din România asupra exporturilor și dezvoltarea durabilă*, „Romanian Economic Journal”, Volume 33, issue 2 (42), pp. 1-60.

was 1.94 billion Euro. This descendent trend of the FDI during the last years was caused by the vulnerabilities caused by the international economic and financial crisis;

- the processing industry had a weight of approximately 32%, especially in the branches with a low technological level, the high-tech branches were holding a weight of approximately 4.5% of the total FDI within the industry;
- The agriculture had a weight of 1.4%-2.0%, which highlights the low interest of the foreign investors for this sector, also due to the relatively low profit, the seasonal character of the activity and the instability of the agricultural production level generated by the climatic factors.

Analyzing realistically the role of FDI in the Romanian economy, more careful attention must be paid to the manner in which their impact is manifested on the Romanian economy, and if they answer to the economic and social interest of the country. The acceptance without reserves of the thesis regarding the general healthy effect of the FDI upon the development of the national economy is a unilateral and partial approach. FDI can also have a negative effect upon the national economy, connected, for example, with the leasing of the foreign investors, the full expatriation of profits or the unfavorable impact of certain exports made by FDI firms, based mainly on products with a high consumption of natural capital and cheap labor force or by the so called “transfer pricing”<sup>18</sup>. In other words, it is necessary to analyze to what extent is the thesis according to which the lack of capital “transformed us” in an outlet, a cheap labor force source and staples, right for Romania.

## Conclusions

In the next lines we will point out some of the conclusions regarding the above analysis of the complex phenomena regarding worldwide economic crisis.

Firstly, as we stated above, the momentum of the nominal, financial and monetary economy, with no direct and efficient support in the real economy, will always trigger phenomena of destabilization in economy and society. So this lack of correlations between the two dimensions of an economy was the main factor causing the crisis and subsequent evolutions.

Related to this I consider that one of the measures required for recovering the economic situation is **to reduce the volume of speculative transactions on the financial capital market**, of the securities, complying with rigorously set criteria.

Thus, these measures may target the discontinuation of the stock activity on the secondary market for a certain period of time, including by implementing

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<sup>18</sup> The transfer pricing is specific to the export of the goods and services from the country of assignment of a parent-company at a relatively low price; these goods and services are resold at a price a few times higher after the brand or the package have been changed.

certain limitations or forbidding the **‘naked short-selling’** transactions for an undetermined time, at some companies in the banking and financial sector.

All this kind of financial speculative operations tend to produce more nominal economy effects and are not a truly efficient instrument fighting against the crisis effects. From the point of view of financial institutions, the crisis should also bring into discussion the issue of the bankruptcy effects quantification or that of rescuing a bank in difficulty, comparative with the same bankruptcy situation of a big company of national importance in the industrial field or other sector. We consider that if most of the resources should be directed towards improving the production sector emulation at the level of economic efficiency, the situations of helping financial institutions without a clear recovery from the consequences of the crisis will be no longer on the current agenda.

Consequently, it is necessary to decide bankruptcies and company rescues, during the crisis periods, considering serious analysis and not temporary interests, personal interests or group interests imposed extra-economically by power within or outside the country.

With respect to the new industries, we emphasize the need to **elaborate a national reindustrialization strategy**, having in view that according to the latest statistics, industry, in general, and **manufacturing industry**, in particular, have experienced a rapid recovery potential, contributing to an increased GDP and to Romania coming out of the crisis. In support of this conclusion are the statistics showing that between 2009 and 2011, only a minor part of the tertiary sector contributes, to some extent, to Romania overcoming the crisis, while some of its major components have a negative impact. So the opinion credited not long time ago that the tertiary sector of economy can bring most of the economic development is out-dated in the context of the actual crisis in Romanian economy.

Another conclusion of our study is related to the fact that analyzing realistically the role of FDI in the Romanian economy, more careful attention must be paid to the manner in which their impact is manifested on the Romanian economy, and if they answer to the economic and social interests of the country. Not every kind of FDI and any occasion represent an effective instrument for the development of Romanian economy, many of these companies having developed a highly efficient export mechanism of profits made at the level of our economy.

At the end of the conclusions I want to emphasize again the fact that during the economic crisis, the economic role and intervention of the state must intensify.

We are talking about a state with professional decision makers and performers and not about one affected by corruption and the incapacity to manage the crisis within the financial and banking system and the production and distribution system of public goods and services or private ones with strategic importance (food security, health, education, occupancy, etc.).

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# THE IMPACT OF FINANCIAL INNOVATION ON BANKING REGULATION. EVIDENCE FROM THE GLOBAL FINANCIAL CRISIS

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## **Abstract**

*The development of financial innovations in a fast pace led to increased efficiency of the financial system, but raises some issues regarding the regulation and supervision of financial activity. The latest example is the global financial crisis, which has pointed out the negative role played by the financial innovations of credit risk transfer on the stability of the financial system. Starting from the above, the article herein is structured in the following sections: the first one reviews the decisive factors of the financial innovation, the second one highlights the role of the financial innovations in the global financial crisis and the final one refers to the impact of the financial innovations on the financial regulation and supervision.*

**Keywords:** *banking regulation, financial innovation, global financial crisis*

**JEL Classification:** G20, G21, G28

## **Introduction**

Similar with other fields, the latest decades might be described as witnessing a speedy pace of development of the financial innovations. Many of such innovations have occurred on the international markets or in the United States and Great Britain. Moreover, there is a complementarity between the two countries regarding the emergence and dissemination of the new financial products. As mentioned in a report on the London importance in the British economy, one of the key factors underlying the development of the financial innovations in London (mainly in the last ten years) is the complementary relations between the operations in New York and London. In other words, the financial products emerge and develop in New York and, later on, they are adopted and circulated for international purposes in London – very often via the London branches of the American banks. Other crucial factors that have constituted a stimulus for the financial innovations in the City of London include its ability to attract new talented youth from various countries and the regulation regime based on principles practiced by the Financial Services Authority (Wood and Wojcik, 2010 cited by Gordon et al., 2009).

The financial innovations have rapidly spread onto other markets, first in the developed countries and then in less mature markets with lower level of economic development. Thus, a feature of the financial innovations is the rapidity they propagate from one financial institution to another, from one financial market to another, which favors the process of integration at the international level.

Besides their positive effects, the financial innovations bring several problems about the regulation and supervision of the financial activity. The most recent example is the global financial crisis. The modern instruments of credit risk transfer increased vulnerability of the financial system. In this context, the building of a regulatory framework for the financial innovations is required, to allow the development of the financial innovations that are beneficial to the system and also to restrict the innovations that could affect the stability of the financial system.

### **Literature review**

The financial innovations have given birth to numerous publications on the decisive factors which led to their rapid development (see among other: Mishkin, 2007; Kane, 1977, 1981, 1988; Howells and Bain, 2008; Frame and White, 2002; BIS, 1986). Wood and Wojcik (2010), cited by Gordon et al. (2009), mention the crucial factors that have constituted a stimulus for the financial innovations in the City of London. Llewellyn (1992) identifies common points and major differences between the financial innovations and the innovations in other sectors. The global financial crisis raised several issues regarding the role and impact of financial innovations on financial stability (Llewellyn, 2010; Gambacorta and Marques-Ibanez, 2011; Dowd et al., 2011, ECB, 2008; Beck et al., 2010, Vives, 2010). Since its first stages of development, the financial innovation raised a series of questions regarding the banking regulation and supervision (BIS, 1986; Howells and Bain, 2008). BCBS (2010a, 2010b), BIS (2009), Pol (2009), Cechetti (2010), Picciotto (2010) propose measures to reform the financial regulatory framework and financial innovation.

#### **1. The financial innovations – particularities and decisive factors**

In his attempt to draw a parallel between the financial innovations and the innovations in other sectors, Llewellyn (1992) identifies common points and also major differences. As well as in other industries, the reason of the financial innovation process is the increase of efficiency and competitiveness. Nevertheless, there are three fundamental differences between the financial innovations and the innovations in other sectors: (1) unlike many industries, the research costs for creating new products are relatively small in the financial area; (2) since there is no invention patent, the financial innovations are easy to copy and (3) the financial innovations are strongly influenced by regulations: many of them derive from the desire to elude the legal stipulations that affect the profitability of the financial institutions. The author states that, while the copying of an innovation requires a longer time in various industries and thus the inventor benefits from a market



advantage, this interval in banking sector is very small, of a few days. The fact that the financial innovations are visible and immediately copied contributes to increasing the financial integration at an international level (p. 16).

Starting from the premise that not all the financial innovations are economically beneficial, Mason (2008, p. 11) classifies the innovations into “real” and “nominal”. The former ones involve important economic benefits, while the latter are vehicles that mainly raise the compensation in Wall Street, with few real benefits. Thus, Pol (2009, p. 9), defines a “toxic” financial innovation as being “a nominal innovation which single or jointly with other financial innovations provokes a financial crisis”.

Depending on the reasons underlying the process of financial innovation, Mishkin, 2007 (p. 250-257) has grouped the financial innovations in three categories:

(1) *financial innovations as responses to changes in demand conditions*. In this sense, it is worthwhile mentioning the increase of the interest rate volatility, which has determined the increase in the demand for financial products and services that are meant to attenuate the interest rate risk;

(2) *financial innovations as responses to changes in supply conditions*. Developments in information technology have enabled financial institutions to create profitable products and services since the cost of processing financial transactions have decreased. These developments also allowed companies to issue easier securities because investors have the possibility to acquire easier financial information about company. Therefore, these changes resulted in new financial products and services, such as: credit and debit cards, e-bank, commercial papers and securitization;

(3) *financial innovations meant to avoid regulations*. Kane (1977, 1981, 1988) introduces the *regulatory dialectic* concept. Basically, financial institutions resort to financial innovations in order to avoid strict regulations affecting their profitability. In turn, the authorities introduce other rules as response to the financial institutions action and this “game” is endless.

Regulation, technology and volatility also are cited by Howells and Bain (2008) to explain the burst of financial innovation since the 1960s.

Frame and White (2002) identify other factors that stimulate financial innovations. Charging differential taxes on different streams of income or on different categories of assets determine the finding of new ways to reduce taxes. Taxation increase has the same effect. Financial innovations may also be stimulated through a proper intellectual property protection regime.

A thorough analysis of the factors that have stimulated the process of financial innovation on international financial markets in 1970s and 1980s was conducted by the Bank for International Settlements in a study on innovation in international banking (BIS, 1986, pp. 7-9). According to this study, financial innovations were stimulated by the interaction between several trends: rising inflation, financial market instability, the increased interest of investors toward securities in the detriment of bank deposits, the banking regulations that introduced

the minimum capital requirements, increasing competition in the banking system, and technological progress.

## **2. The role of financial innovations in the global financial crisis**

The defining feature of the latest financial innovation wave is the development of instruments (collateralised debt obligations, credit default swaps) and vehicles of credit meant to transfer the credit risk from the originating bank to other banks. Such instruments have revolutionized the traditional banking model, giving rise to the new banking model (the “originate to distribute” model), which increased the risk of financial crises (Llewellyn, 2010).

Traditionally, banks attract deposits from customers and grant loans, which are supported by these deposits. The banking income derives mainly from the difference between the interest on loans and the interest on deposits. Main banking products and services are loans and deposits (table 1). Banks grant loans, keep them in the balance sheet until maturity, and bear the credit risk (the “originate to hold” model). The products are distributed through traditional subsidiaries, called in specialist literature “brick and mortar”. Banking was strictly regulated and the financial and banking sector was relatively stable.

In the last three-four decades, the banking framework has undergone significant changes, following a series of factors, as deregulation and financial market liberalization, financial innovations, increased competition in the financial and banking field as well as information technology developments. This has entailed the decline of traditional banking in various states of the world. For example, in 1974, in the United States, commercial banks provided close to 40% of total nonfinancial borrowing, while by 2005 their market share dropped to below 30% (Mishkin, 2007, p. 257).

On this background the last decades have been marked by significant changes in the contemporary banking systems at international level, resulting in: mergers and acquisitions; disintermediation and increased off-balance sheet operations; securitization process. The afore-mentioned processes vary from one banking system to another. Initially, such changes focus on the developed countries, subsequently covering other states as well.

The banks focus more and more on services and on commission-based income and less on interest-based income. The range of products and services has diversified covering – besides deposits and credits – securities operations, insurance, investment funds and the like. Competition in the banking sector has increased (table 1), and regulations have taken new shapes. The clients have started to open bank accounts at various banks, being able to transfer their funds from one bank to another merely by a mouse click. Moreover, they may choose not only among local banks, but also among foreign banks and other financial institutions. The banks focus on the market and on the customers’ requirements, developing marketing strategies in terms of products and services, price, promotion or distribution channels. The automated teller machines, home-banking and Internet-banking compete with traditional banking branches.

**Traditional versus modern banking**

<i>Traditional banking</i>	<i>Modern banking</i>
Products and services: LIMITED <ul style="list-style-type: none"> <li>• Loans</li> <li>• Deposits</li> </ul>	Products and services: UNIVERSAL <ul style="list-style-type: none"> <li>• Loans</li> <li>• Deposits</li> <li>• Insurance</li> <li>• Securities/Investment banking</li> <li>• Pensions</li> <li>• Other financial services</li> </ul>
Income sources: <ul style="list-style-type: none"> <li>• Net interest income</li> </ul>	Income sources: <ul style="list-style-type: none"> <li>• Net interest income</li> <li>• Fee and commission income</li> </ul>
Competitive environment: <ul style="list-style-type: none"> <li>• Restricted</li> </ul>	Competitive environment: <ul style="list-style-type: none"> <li>• High competition</li> </ul>
Strategic Focus: <ul style="list-style-type: none"> <li>• Assets size and growth</li> </ul>	Strategic Focus <ul style="list-style-type: none"> <li>• Returns to shareholders</li> <li>• Creating shareholder value (generating Return-on-equity, ROE, greater than the cost of capital)</li> </ul>
Customer focus: <ul style="list-style-type: none"> <li>• Supply led</li> </ul>	Customer focus: <ul style="list-style-type: none"> <li>• Demand led</li> <li>• Creating value for customers</li> </ul>

*Source:* Casu Barbara, Claudia Girardone, Philip Molyneux, *Introduction to banking*, Pearson Education Limited, Edinburgh, 2006, p. 52.

Financial innovations and rapid developments in information technology allowed banks to develop a new banking model: banks grant credits and sell them to a special purpose vehicle which issues securities collateralized by credits (the “originate to distribute” model). The investment bank underwrites and sells securities, the entity specialized in servicing the credits collects the capital installments and the interest from borrowers, while final investors provide the funds and assume the credit risk. Revenues collected by the originating bank no longer take the form of interest, but of commissions charged for initiating the operation, and, eventually, collecting capital installments and interest (if the originating bank also fulfills this function). According to Gambacorta and Marques-Ibanez (2011), development of the securitization process was stimulated by the development of the institutional investors, which allowed the banks to base their funding on market instruments. But as Dowd et al. (2011) states, the primary factor driving the securitization in the last two decades was the regulatory arbitrage that allowed banks to lower capital requirements. Another way to lower the regulatory capital was the credit derivatives contract, especially the credit default swap (CDS). By buying a CDS contract, banks transfer credit risk and receive compensation in the event of a loan default.

Until the crisis triggered, the credit transfer financial instruments were considered a means to increase the efficiency of the financial system. BIS (2003) considered that these instruments allow a better risk management, the loosening of certain requirements regarding the credit offer, the more efficient allocation of risk upon a broader mass of entities, the increase in transparency and liquidities on the credit markets. The most important problem associated to the new banking model was the asymmetric information between the originating bank, on the one hand, and investors in bank's asset-backed securities along with the seller protection, on the other hand. Because banks no longer assume the credit risk like in the traditional banking model, are not interested to carry out a strict assessment of the debtor's ability to repay the credit and, therefore, credits quality deteriorate. Moreover, motivated by the desire to get as many bonuses as possible, employees were not encouraged to make a correct assessment of customers' creditworthiness. This practice leads to destabilization of the financial system. Besides, increased complexity of financial instruments determines hiding of risks. In accordance with the above, Jean-Claude Trichet (ECB, 2008) emphasized that financial crisis revealed some lessons, among which the impact of financial instruments for transferring risk and structured credit markets on financial stability:

“...These developments have facilitated the transfer and redistribution of risks across the financial system, thus increasing its efficiency and potentially its resilience to shocks. At the same time, as recent events have shown, the growing complexity of financial instruments and the opacity of exposures of financial institutions can give rise to increased uncertainty regarding the degree of risk involved, the ultimate bearer of the risk, and the extent of potential losses. As we presently see in periods of turbulence, this complexity and opacity may prompt a further propagation of initial shocks and a more generalised contagion” (ECB, 2008).

In this context, Beck et al. (2010) state that although it is difficult to predict the trend in the European and global banking systems, the financial crisis and the latest observations suggest the return to the traditional financial intermediation based on deposits and credits. The same predictions are made by Vives (2010) and Llewellyn (2010).

### **3. The impact of the financial innovation on the financial regulation and supervision**

Since its first stages of development, the financial innovation raised a series of questions regarding the banking regulation and supervision. As many of the financial innovations (swap, NIFs, securitisation) have been actively promoted, besides the commercial banks by other financial institutions, especially investment banks, it has been discussed that the latter should be submitted to supervision, even if they do not accept deposits from the public. But as the products offered by the investment banks are more and more similar to the ones offered by the commercial banks and the probability for the bankruptcy of an important investment bank to destabilize the financial-banking system is growing, the supervision of these

financial institutions would be justified. At the same time, if the supervision area would become broader, then the investment banks could suggest that the support granted by the central banks to the commercial banks for overcoming the liquidity problems should also be granted to them.

On the other hand, the more and more intense development of the operations specific to the financial investment activities within the banking organizations led to the increase of the pressure regarding the abolition of the Glass-Steagall type regulations, where these restrictions existed (BIS, 1986, p. 239-241).

Howells and Bain (2008) mention some particular aspects that the financial innovations and the technological evolutions raised to the authorities in charge of regulation and supervision: the screen-based trading systems development; the development of the securitization process; and of the new derivative products; the increase of the risks associated to the off-balance sheet operations; the risks associated to the fast changing on-balance sheet positions.

According to the Financial Stability Forum recommendations, the starting point for reforming the current regulatory framework of international financial activity is the package of measures initiated by the Basel Committee, known as the Basel III. The Basel III regime are designed to strengthen the Basel II capital framework, with regard primarily to the treatment of certain complex securitization positions, off-balance sheet vehicles and trading book exposures ([www.bis.org/bcbshistory.htm](http://www.bis.org/bcbshistory.htm)). In order to strengthen the resilience of banking sector, the Committee has also adopted an international framework for liquidity risk.

As Pol (2009) highlights, an important difference between the 1930-1933 crisis and the global financial crisis is represented by the financial regulatory framework: whereas in the first case, we could talk about the lack of the regulations, between 2000-2008 the regulations regarding the financial system were abundant (even though they only regarded the traditional banking system and did not include the shadow banking system). The author states that a characteristic of the global financial crisis is the failure of the regulations, manifested by the incapacity of the regulation and surveillance systems in certain developed countries to adapt to the shifts on the financial markets and to evaluate the risks associated to the new financial innovations.

Regarding the balance between the financial innovations and the financial stability, Llewellyn (2010, p. 19) observes that until 2007 the financial innovations and particularly the ones regarding the credit risk transfer developed under apparent stability conditions (macroeconomic, inflation, interest rates etc.). As a consequence, the stress tests accomplished were based on data associated to an economic environment characterized by a low level of risk.

In order to diminish the negative effects certain financial innovations can have upon the financial stability, Pol (2009) proposes a new institutional arrangement, an “institutional innovation” consisting in creating an institution (Financial Innovation Administration – FIA) with the aim to register and evaluate any new financial idea. Thus, there is no longer allowed to trade any financial innovation, but only those innovations for the public interest and that do not cause the increase of vulnerability on the financial markets. The author compares this

institution and the Food and Drug Administration operating in almost every country. As the biological innovations cannot be launched on the market until after certain clinical trials are carried out, the financial innovations have to pass some tests before being commercialized. Among the financial innovations that should not be practiced, there are: the financial innovations that suppose granting credits without taking into consideration the capacity of the person to pay back the money; the financial innovations based on granting credits that can only be paid if the price of the respective assets keeps growing; financial innovation of the Ponzi scheme.

With regard to the risks and weaknesses of this institutional innovation, the author highlights: (1) the government could intervene in this proposal and be much too intrusive; (2) there are appropriability issues associated with the FIA; (3) in order to attain the purposes, FIA must be accepted internationally.

For the purpose of maintaining a balance between safety and innovation in the field of financial instruments, Cechetti (2010) advanced a regulation proposal similar to the one within the pharmaceutical field: just as the medicine that does not require a medical prescription, the safest financial instruments may be available for everybody; as the safety degree of the financial instruments decreases, a more limited number of users will have access to them.

The same proposal is made by BIS (2009, p. 126-137). Improving the safety of financial instruments involves creation of a system that rates the safety of these instruments, limits investor access to these instruments and provides warnings about their risks. In line with these observations, Picciotto (2010) mentions that financial derivatives should be regulated through a system of registration and certification.

## **Conclusions**

A defining characteristic of the recent decades has been the rapid development of financial innovation. The main factors that have contributed to the development of financial innovations are the rapid developments in information technology, increasing instability of financial markets and financial regulations. A particularity of financial innovations compared with innovations in other areas is the critical role that regulation of financial activities has in creating new products and services, new mechanisms, new financial institutions and markets.

The weaknesses revealed by the global financial crisis imposed the reforming of the current financial regulatory framework in order to better capture the risks caused by the financial innovation process. Another goal of the reforming process is to keep a balance between innovation and progress, on the one hand, and safety and financial stability, on the other hand.

In order to achieve this goal, several measures have to be taken. Mainly, the measures to improve the safety of financial instruments consist in creation of a system of registration of any new financial instruments that have to classify these instruments depending on their risks and benefits for the society. The instruments that are toxic and menace the financial stability should be prohibited. To avoid regulatory arbitrage and to have the expected effect these measures should be applied at international level.

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# PROFESSIONAL RESPONSIBILITIES OF THE ECONOMICS TEACHERS

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## Abstract

*The present paper's aim is to present the professional responsibilities belonging to teachers of economics. Firstly, we mentioned the mixed investigations addressed to the teachers activities: pedagogical, psychological, social and axiological.*

*Secondly we define the expectancies concerning the teachers' knowledge, abilities and attitudes in the present day's environment learning. In order to establish these issues, we identified the needs of the education system. Here we present the actual points of view, advised pedagogical opinions, stages of the research in this field.*

*Within the last part of the paper, we established the responsibilities for the teachers; expectancies under the form of enunciations for the following five activity domains: instruction, evaluation, learning environment, human relations and professional engagement, at the same time taking into account the three dimensions: knowledge, abilities and attitudes.*

**Keywords:** *professional responsibilities, economics, teachers*

**JEL Classification:** A20, A21

## Introduction

As an agent of the educative, institutionalized action, the teacher is the object of some investigations of a mixed type: pedagogical, psychological, social and axiological.

All of them are perspectives which have their own particularities and scopes, defining together the dimension of the teachers' professionalism, especially the degree the teacher master a quantum of individual skills which lead him to a continuous growth and developing as a specialist [Călin M., 2003, p.176].

In the present day's learning environment, one necessary action is to define the expectancies that concern the teachers' knowledge, abilities and attitudes. In

order to establish these issues, we have firstly to identify the needs of the education system. Our own analysis as well as the advised opinions and materials expose the needs of the pre-university system of learning.

We established that the efficient teaching implies difficult and fundamental decisions, the usage of some close judgments and the observance of the complex nature of the education mission. More than the technical pieces of knowledge and abilities to be used in the current practice activity, the teacher must be aware of the ethic dimension of their profession. From this point of view, the teachers' primordial mission is to form abilities and attitudes, as well as to promote the comprehension (empathy), through a responsible recognition of the human diversity of needs and features implied.

### **Literature review**

Thus, the teachers have to master a repertoire of educational methods and strategies and, at the same time, to reflect critically on their own activity. Their professional responsibilities concentrate both on the students' education and on the participation at diverse activities, which imply the partnerships with the parents and the community.

Due to the present day development of the pedagogic domain, the teaching ceased to be only an activity of preserving the cultural patrimony and of transmitting it to the new generations. That is why the teachers have also the responsibilities to take into consideration the new knowledge structures, practices and definitions, to invent and experiment new approaches and, if necessary, to implement organizational changes in order to improve the school environment. As agents of the public authority in a democratic society, the teachers contribute to the dialogue concerning the preservation and improvement of the social environment; they also initiate the future citizens in the consequent participation at the public life.

The professional standards of the didactic activity reflect the consensual opinion on the teaching art and science, characteristic of the performing teachers. If we refer to the actions the teachers have to organize in order to improve the students' results, we have to mention that these standards comprise also the knowledge, the attitudes and the essential pedagogical engagements necessary for practicing this job.

These standards are based on a philosophical conception which can be comprised into five essential statements:

- the teachers devote themselves to the students and the didactic activities;
- the teachers know the taught content and have the necessary pedagogical knowledge;
- the teachers are responsible for the control and monitoring of the students learning activity;
- the teachers systematically reflect upon their activities and learn from their own experience;
- the teachers are members of the educational communities.

The performing teachers use the skill of creating new curricula in order to develop the present knowledge and understanding of the students and of their progress toward high abilities, knowledge, concepts and performances.

The teachers adapt the actions to the level of students' interests and abilities, by elaborating and implementing educational activities in the so called proximal zone of learning and development, a concept proposed and described by Vygotsky [Ostrom T.M., 1978 and Costea Șt. et al., 2003, p. 134-135].

As the domain of the continuous training is concerned, Tatiana Callo utters that in the Moldova Republic they approached several aspects, such as the professional training on the base of the real needs of the students, as the Memorandum for the permanent learning says [<http://www.nbpts.org/>, p. 15].

David Fontana asks himself which is the efficient teacher: the person who helps the socio-emotional development of the students or the one who helps their cognitive development? [Fontana D., 1995, p. 383]

For Michel Bonnet [in Stan E., 2004, p. 143], the role of the teacher is understood from the perspective of the ethos and of the market language, that meaning those elements which constitute the economist perspective. A similar perspective is sustained by Nigel Blake [Blake N., 1998, p. 81]. He criticises those approaches which see the learning as a changing economy.

Schunert J. [Schunert J., 1951, p. 219-238] and Fattu N. [Fattu N., 1963, p. 244-251] were preoccupied with the teacher's psycho-pedagogical knowledge.

Other studies argue the types of the relations between the teacher's personality variables and the students' motivation: Cook W. et al. [Cook W. et al., 1951, p. 159-168] and Ryans D. [Ryans D., 1961, p. 82-90] studies utter that teachers with affectionate personalities tend to be more favourable appreciated by different observers.

Cogan M. [Cogan M., 1958, p. 89-105], Reed H. [Reed H., 1961, p. 205-229], Sears P. [Sears P., 1963, p. 44-57] studies underline that the teachers' affection correlates significantly with the volume of work realized by the students.

In addition, these educators use a wide range of strategies and instructional resources, adapted to the students' skills and to these different modalities of exploring ideas and concepts. They understand how to work as mediators, trainers, models, evaluators, managers and counsellors. They also use various forms and didactic games, different strategies of grouping the students and different types of media resources.

The teachers observe and evaluate the students during the class activities. They have the ability to collect and interpret in different ways the received information and to assess the level touched by every student during the process of learning and developing.

They understand and respect the cultural value and familial diversity of the students, use the members and the community resources as learning resources, imply the parents and the family as partners, for the total development of the students.

Each moment constitutes an opportunity for the teacher to answer creatively to the school life provocations. They profoundly analyze and apply individual

observances for every student, in order to guide the judgments and answers. They reflect on their own performance in the light of the students' performances and progress, are interested in their colleagues' opinions and reflect upon the options and consequences.

### **The teachers' professional responsibilities**

Beginning with the present needs of the system of learning, we established responsibilities for the teachers; expectancies under the form of enunciations for the following five activity domains: instruction, evaluation, learning environment, human relations and professional engagement and also taking into account the three dimensions: knowledge, abilities and attitudes.

For the **Instruction** domain, we established the following seven responsibilities:

- 1) the teacher realizes a coherent instruction, based on the field of knowledge;
- 2) the teacher plans the instruction for reaching the curricular proposed objectives;
- 3) the teacher differentiates the instruction, depending on the students needs;
- 4) the teacher creates and uses a variety of materials, resources, strategies which promote and develop the students' critical thinking and problem solving;
- 5) the teacher motivates the students gain knowledge and abilities in order to take decisions and act as responsible citizens in the society;
- 6) the teacher motivates the students to be an active part in the instructional process;
- 7) the teacher stimulates the attitudes and the positive approaches in students' learning, their effective communication in and outside the classroom.

For the **Evaluation** domain, the responsibilities are the following:

- 1) the teacher uses a variety of assessing strategies, which offer a correct valuation to each student;
- 2) the teacher offers feedback for the improvement of the students' performances;
- 3) the teacher uses the evaluation results for instructional decisions for long and short term, in order to improve the students' activity;
- 4) the teacher assists the students in developing their skills of self-evaluation;
- 5) the teacher is able to assess both the individual and the whole class progress;
- 6) the teacher uses the assessing results in order to revise his activity and monitor the instruction efficiency;
- 7) the teacher aligns the evaluation with the purposes, the objectives and the curricular strategies.

For the third domain, the **Learning Environment**, the following six responsibilities are to be taken into consideration:

- 1) the teacher uses efficiently the available time during the class, for an efficient and smooth instruction;
- 2) the teacher communicates and implements clear expectations about the students behaviour during the educative activities;

- 3) the teacher organizes the classroom in order to assure a safe and productive learning environment for the students;
- 4) the teacher involves the students in a disciplined educational environment;
- 5) the teacher represents a model concerning the enthusiasm about learning and devotion for the consistent work;
- 6) the teacher cultivates the family interest for the children education.

The fourth domain is the **Human Relations**. Here, we have the following responsibilities:

- 1) the teacher knows and masters different types of communications;
- 2) the teacher shares the pedagogical resources with his colleagues;
- 3) the teacher establishes relations of efficient, positive communications with his colleagues, students, parents, community;
- 4) the teacher demonstrates positive character features (amiability, humour, politeness, respect);
- 5) the teacher contributes to the efficiency of the school's activities through collaborations with his colleagues;
- 6) the teacher develops partnerships with other institutions;
- 7) the teacher cultivates the students respect for individual and of group differences.

The **Professional Engagement** is the fifth domain. We present below the specific actions for it:

- 1) the teacher shows a manner of life proper to his profession;
- 2) the teacher participates continuously to a process of professional development;
- 3) the teacher adheres to the school and country policies and regulations;
- 4) the teacher collaborates for developing and/or implementing the mission and the goals of the school and education system;
- 5) the teacher effectively maintains the communication with the students, their families, the school staff;
- 6) the teacher engages himself in activities of professional development, in conformity with the purposes and the objectives of the school, the area and the country.

## **Conclusions**

The present paper presented the changes that occur in the present day learning environment; these issues affect all the actors involved in the learning process.

At first we mentioned the mixed investigations addressed to the teachers activities: pedagogical, psychological, social and axiological. Then we defined the expectancies concerning the teachers' knowledge, abilities and attitudes. In order to establish these issues, we identified the needs of the education system. Here we presented the actual points of view, advised pedagogical opinions, stages of the research in this field.

Within the last part of the paper, we established the responsibilities for the teachers; expectancies under the form of enunciations for the following five activity domains: 7 for instruction, 7 for evaluation, 6 for learning environment, 7 for human relations and 6 for professional engagement; we also took into account the three dimensions: knowledge, abilities and attitudes.

The paper represents a piece of scientific work of research. The affirmation is sustained by the following novelties: the establishment of the activity domains in this form and order and the establishment of the 33 professional responsibilities of the teachers.

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# THE ECONOMIC AND FINANCIAL CRISIS. THE EURO AREA

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## Abstract

*The article proposes an analysis of some European financial markets on the background of the recent crisis, markets that have become very alarmed by the increase of the Euro States' budget deficits and the possible entry of some of them in a situation of not being able to pay rates on debts contracted by the Government. Such imbalances can be avoided in general either by a correct evaluation or by a controlled devaluation of national currencies, or by means of the exchange rates of various currencies. However, in the Euro area, this is not possible due to the very existence of a single currency, a context in which the authors suggest the use of alternative solutions.*

**Keywords:** *economic crises, euro, sovereign debt problems*

**JEL Classification:** G01

## Introduction

Economic and financial crises have occurred since Roman times, and their degree of complexity has increased with the development of capitalist society in general and with the configuration global economy – starting with the 16<sup>th</sup> century – and the formation of relationships of interdependence between different countries of the world, reaching a point of maximum complexity in the current economic and financial crisis.

## Theoretical background

Modern economic theories reject the idea of general theorization of economic and financial crisis, according to which they can be included in a general valid model, considering that each financial crisis is unique, each representing in fact a historical accident, caused by specific factors, in a particular social, economic or political situation. According to these theories, crises are not predictable, so that their negative effects to be reduced to a minimum. However, history shows that, although economic and financial crises do not occur and have no effect on identical parameters, they are closely related to the cyclical nature of economic processes.

Although the causes of cyclical evolution of economic processes have not yet been strictly identified, their cyclical nature is evident. Economic cycles, whether they are short, medium or long term, consists of two phases – expansion and recession.

In the expansion phase, there is an increase of economic efficiency in business generated by the introduction of significant technological innovations, while the recession means a weakening of the springs that produced economic propulsion.

If short (lasting between 10 and 40 months) and long-term (so-called secular cycles, lasting between 40 and 60) cycles end with recession characterized by slow growth, decennial cycles (also called business cycle, which lasts from 4 to 6 years, up to 10 to 12 years) are characterized by the phenomenon of crisis, in which demand, production, employment of labor, GDP, liquidity decrease dramatically and the standard of living is getting worse.

### **Economy crisis in Member countries and the Euro Area**

At the end of 2009, when the economic crisis was already in full swing but the European banking sector seemed for the time being rather stable, a number of international investors began to raise the issue of potentially dangerous situations related to the debts of several sovereign Member States of the European Union and the Euro Area. It was the case of countries such as Greece, Ireland, Portugal, Italy and Spain, without however being alone in a particularly difficult situation. The situation became much tensed in 2010, when states within and outside the Euro Area were added on the list. It became obvious that saving the banking system had generated debt increases as well as a crisis of confidence. Financial packages were granted to Greece, Ireland and Portugal in order to avoid such a denouement, with possible catastrophic effects for the European currency.

Although the sovereign debt crisis was triggered in appearance by Greece's difficult situation, the Euro Area economy as a whole is affected, primarily, by a decreasing confidence in the economies of the acceding States because of the high level of indebtedness of their Governments. In 2010, Ireland had a deficit of € 32.4% of GDP, the United Kingdom of 10.4%; the deficit was of 9.2% in Portugal and in Spain of 9.1%, these being the countries with the highest systemic risk (Eurostat, 2010). In the same year, Greece had a huge debt of 142% of GDP, Italy of 119%, Portugal of 93%, Ireland of 96.2%, Germany of 83.2%, France of 81.7%, the United Kingdom of 80% and 53% in Spain. The need for financing of Euro Area countries in 2010 was of 1,600 billion Euros, the countries with the highest risk for payment of debts being those whose governments relied on foreign investors for funding. This situation occurred in the context of the investors' confidence in the bonds issued by the Governments of these countries being at a very low level.

At the same time, even if Greece's economy represents only 2.5% of that of the Euro Area, a possible bankruptcy of the Greek State was viewed as a source of aggravation of the situation and problems within other States and the European single currency.



## **The Greek State bankruptcy and the European currency**

The difficult situation of Greece seems to have roots in the way that this country managed the economy and budget in the last 40 years. As early as 1974, following the end of the military dictatorship, wishing to keep the movements of the left under control and the dissatisfaction of a broad part of the population with leftist orientations, successive Governments of Greece structured budgets based on high deficits, in order to get enough money that would assure the necessary funding for a relatively bulky and costly public sector that involved salaries, pension schemes and other social benefits. In this context, the Greek economy had been running since 1993, with public debt exceeding 100% of GDP.

Before joining the Euro Area, the Greek State loans had been funded through a policy of national currency devaluation, which allowed achieving substantial profits from exports and especially tourism. After the introduction of the Euro, this system was replaced with a reduced interest of Treasury bonds. However, in 2007, the beginning of the world economic crisis hit the two most powerful sectors of Greece's economy, namely tourism and shipping. Their profits had already declined by 15% by the year 2009. However, the Greek Government has hidden the real situation of the growing public debt, while continuing to practice the same system of public expenditure.

This situation became public in 2009 with the change of Government which reviewed the budget deficit from 6% of the official amount at 12%. This amount had increased by the year 2010 at 13.6% of GDP, one of the largest in the world, with a debt estimated in January 2010 at 216 billion Euros. At that time, 70% of the bonds issued by the Greek State were held by foreign investors. The indebtedness of the Greek State was aggravated by domestic tax evasion estimated at about 20 billion dollars annually.

It should be noted that despite this context, in 2010, the state bonds issued by the Government of Greece were purchased for a total of 20 billion Euros, with a fixed rate term of 5 years which is worth 5 times more than anticipated by the Greek Government, five billion Euros for a period of 10 years with additional requests 3 times higher, for this category of bonds.

In this context, as a result of the decrease in the level of descriptions provided loans to Greece by international independent agencies, interest on bonds issued by the Government of Greece grew initially with a percentage of up to 15%, a phenomenon that generated concerns regarding the ability of this country to pay its debts. As a result, Greece asked for external financial assistance from the IMF and the European Commission, which called for the implementation of an austerity plan in 2010 with the purpose to reduce governmental expenses and to increase confidence in its ability to pay rates on debts accumulated and long-term loans granted by the two institutions.

In the absence of the financial package, there is a risk that Greece might not be able to pay a part of its huge foreign debt. The probability that this theoretical

situation should become real was estimated to be between 25 and 90%. More problematic, however, were the features and results of such a situation.

Very likely, the Greek State bankruptcy might have taken the form of a financial and economic restructuring with a partial payment of the accumulated debts, estimated at 25-50%. The most important consequence might have been Greece's coming out of the Euro Area, a particularly dangerous situation for the European currency consisting primarily in the loss of investors' confidence in it. However, viewed from the opposite angle, the solutions suggested by the EU officials may turn out to have possible long-term adverse effects. Very tight fiscal constraints and damaged social situation could have a negative impact especially on the economic recovery effort. This is generally the most criticized aspect of the IMF's lending policies.

### **Ireland, Portugal and Spain and the European financial package of measures**

As far as Ireland is concerned, in December 2008, following the discovery of unreported loans made by the Anglo Irish Bank, it was nationalized in 2009 through a legislative act. In this way, the Irish took over not only the ownership of assets of the Bank but also its liabilities. In addition to the Anglo Irish Bank nationalization, the Irish State in general took over the majority of the national banking system debt in an attempt to save it from collapse. However, even if in 2010 the Government of Ireland announced that the support for debt of the banking system did not generate serious problems, in 2011, due to a sudden decline in confidence in the creditors' ability to pay those debts, it was forced to negotiate a financing agreement with the IMF and the European Commission. The agreement was accompanied by a package of measures intended to reduce public expenditure and to increase the collection of money from the national budget. As a result, Ireland, one of the countries with the strongest economic growth in the European Union before the crisis, entered practically in a recession period.

The difficult financial situation of Portugal seems to have originated in a longstanding policy of excessive government spending and investment, by means of partnerships of public-private type. These would be added to high-risk loans contracted by the Portuguese Government and non-efficient management of European funds. In this context, as a result of the global financial crisis, Portugal is currently in a situation almost as difficult as that of Greece.

Although at the beginning of 2010, Portugal had one of the best economic recovery rates in the EU, in May of the same year, the leaders of the Euro Area countries approved a 78 billion Euros funding package for this country. The loan was given by European Financial Stabilization Mechanism, the European system of Financial Stabilization and the IMF and has an interest rate of 5.1%. As part of the funding program, Portugal was obliged to privatize the national telecommunications company Portugal Telecom. In this way, Portugal was the third country after Greece and Ireland which received a refinancing package.

In Spain, shortly after the announcement of the European Union to establish an “Emergency Fund” for the Euro Area countries, in May 2010, the Government announced, in turn the adoption of austerity measures intended to reduce the budget deficit of the country. That measure was due to weak economic growth and rising domestic and foreign pressure, especially from the United States of America, the IMF, the European Commission and some of the Euro Area countries. These pressures took a more aggressive approach of the budgetary economies (Pop V., 2010).

With these measures, the Government of Spain succeeded in reducing the budget deficit from 11.2% in 2009, to 9.2% in 2010 (Johnson M., 2011). At the same time, it should be recalled that the public debt of Spain was at the beginning of the crisis in the Euro Area much smaller than that of Greece, Portugal and Ireland, but superior to that of some countries such as Germany or France.

### **Ensuring the long-term fiscal stability of the Euro Area countries – some measures**

In May 2010, the EU member countries approved the establishment of a European Financial Stability Body (EFSB). It is a legal instrument which aims at providing financial assistance of the Euro area in difficulty (European Commission, 2010). In order to achieve this aim, EFSB operates on the basis of a special fund that sells bonds to finance loans of up to 440 billion Euros, granted to countries in need of urgent interest. The bonds are guaranteed by the European Commission, as a representative of all the Community countries, and the IMF. The new body will act only at the request of countries in need of refinancing (Stearns J., 2010). EFSB funds will be added, on the one hand, a credit of 60 billion Euros granted by the European stabilization mechanism, guaranteed by the European Commission under the Community budget and on the other hand an IMF loan worth 250 billion Euros, while pursuing the creation of a fund safety deposit worth 750 billion Euros (Barber T., 2010). An agreement on the basis of these two additional credits allows the European Central Bank (ECB) to buy the loans contracted by Euro Area Governments which in the end to push down the interest on debt securities issued by them (Flanders S., 2010).

In the same context, the ECB has taken a series of measures aimed at reducing the volatility of financial markets and improving the liquidity situation. Of these, the most important are the acquisition of debt obligations of public and private sectors, a rescheduling at intervals of 3 and 6 months of longer-term refinancing operations and reactivation of monetary exchange lines with the Federal Reserve of the United States of America (European Central Bank, 2010). At the same time, the banks which are members of the European system of central banks started to buy government debt.

However, despite these measures, the European Commissioner for economic and Financial Affairs, Olli Rehn, called for Spain and Portugal to take measures for an “absolutely necessary” decrease of their budgetary deficits. However, although the European financial package of measures managed to overcome the momentary

panic on the markets, the credit rating agencies still consider that countries in the Euro Area will continue to have difficulties.

Two important decisions were taken by European leaders for the purpose of ensuring the long-term fiscal stability of the Euro Area countries. The first one consisted in the creation of the already mentioned European Financial Stabilization Fund financially backed by the IMF. The second consisted in starting the process of creating a single authority responsible for the supervision and coordination of fiscal policies of the Government expenditure of the European Union member countries, called the temporary Single European Tresoreria (Crespo). This body may be supported by the European Parliament, the European Council, and especially by the European Commission. However, external monitoring and in-depth tax and budget policies, as well as associated national implementation mechanisms, are considered as a potential violation of the sovereignty of the Euro Area countries.

Irrespective of the measures taken at the level of a country or another to prevent the reappearance of overvaluation of capital assets and current account imbalances, settlement and regulation measures are to be adopted in the area of cross-border movement of capital in order to maintain the balance of payments of the Euro Area countries. This implies that countries importing goods mainly should also produce and import comparable amounts of capital in order to pay for those imports. The converse works for the exporting countries which should predominantly be exporting net capital as well, most often to the countries importing goods. Risks can arise when exports of capital tend to grow faster than supply, leading to an increase in the indebtedness of the importing countries over their real needs and purchase more than the real reimbursement capacity, which may ultimately lead to an overvaluation of capital goods.

Such imbalances can be avoided in general either by evaluating a controlled devaluation of national currencies, or by means of the exchange rates of various currencies. However, in the Euro area, this is not possible due to the very existence of a single currency, the context in which alternative solutions must be found. The first solution would be consumption policies in importing countries, to increase savings and reduce the trade deficit. A second solution could be to reduce budget deficits in order to increase the degree of power-saving state. A third solution could be the control of trans-boundary movements of capital by charging or restriction, in order to reduce the balance of payments imbalances. A fourth solution may be to increase interest rates for encouraging savings deposits, but it has the disadvantage of slow development of the economy and leads to higher interest rates that Governments must pay.

Finally, there is also the already applied solution of austerity, being implemented in most countries of the community. Beyond any argument, the solution may be criticized by some specialists. There is an increasing feeling that such a management solution for the crisis is unfair to the majority of the working population obliged to bear the costs of a crisis triggered by serious errors of economic management of bankers, investors and economists. While so far, in the European Union, 23 million workers have lost their jobs, hundreds of bankers, in

the same country, have become millionaires, despite the collapse or nationalization (supported all by the contributors) of the banks who worked during the crisis (European cities hit by anti-austerity protests, 2010). This situation has caused both from specialists and some European leaders to call for the establishment of a European and global system of regulations and control of the activities performed by private financial institutions.

## Conclusions

In the last two years, leaders of the European Union Member States met increasingly often and have spent even more time for a decisive struggle with economic crisis which swallows the Euro Area and, widespread, the entire European economy. Undoubtedly, the global economic crisis has become a dominant international life (Chirimbu, Murariu, Dorînga, Barbu, 2011, p.23). Could that be seen as a clear indication of imminent failure of the EU political system?

At the beginning of last year, most countries in the European Union were optimistic about overcoming the crisis in the foreseeable future, further there was a considerable change of thinking. Given the economies of most European countries began to emerge from the deepest recession recorded in the Second World War, the economic results of 2012 indicate the beginning of the year for the first time in several EU countries, a slightly upward trend.

For further EU economic recovery, it is essential that the member countries to reduce their debt quickly and with lasting results. A total of 25 European Union countries, including Romania, but not the UK and Czech Republic have signed the European fiscal pact, which provides primarily tax rules for balancing budgets and economic policy coordination at European level. The way EU countries deal with any crisis and the cost of it to various countries will certainly influence in a decisive way, if and how quickly European citizens and economic analysts will begin to believe again in Europe's economic recovery.

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**Section II**  
**MANAGEMENT-MARKETING**





# IMPROVING HEALTH AND SAFETY ON CONSTRUCTION IN ROMANIA. A COMPARISON WITH IRELAND; LESSONS TO BE LEARNED

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## **Abstract**

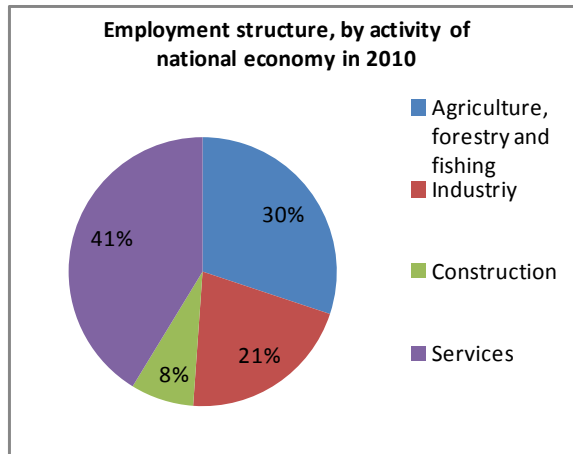
*The purpose of health and safety procedures in the construction industry is to ensure the health, safety and wellbeing of workers. Due to high accident rates on construction sites internationally, health and safety legislation has focused on minimizing accident causation and promoting construction worker's safety. However, little attempts has been made to research the effects of those health and safety interventions on the safety behavior on construction sites in Romania. Therefore, the objective of this research was to explore the health and safety improvements on construction sites in Ireland and compare these with the current state-of-play of the construction sector in Romania. Based on the findings in Ireland, an opportunity exists to improve Health and Safety performance on construction sites in Romania. The main findings demonstrate that the safety can be improved through the introduction of safe working systems, enhanced regulation and enforcement, the role of the management and increased staff awareness and training.*

**Keywords:** *health and safety, procedures, construction workers, safety performance, Romania*

**JEL Classification:** I15, J81, J28

## **Introduction**

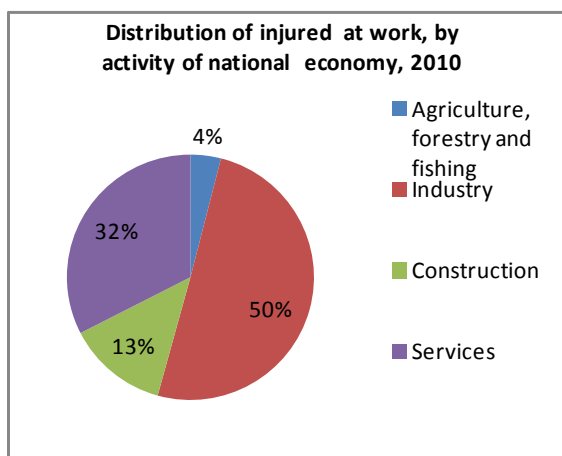
Improving health and safety on construction sites in Romania is of importance from a human as well as an economical standpoint to ensure success and sustainability of the organizations in the sector. Official figures indicate that 705,000 people worked in the construction industry in Romania in 2010, representing 8% of the total employment in Romania (Romanian Statistical Yearbook, 2011), as outlined in **Graph 1**.



Source: Romanian Statistical Yearbook, 2011

**Graph 1**

The construction industry in Romania reflects a high risk sector. Total number of injured people at work was 4,040 in Romania in 2010, of which 535 persons in construction. In addition, nearly 12 per 100,000 workers in the construction sector were the victim of fatal accidents. This compares to a national average of 3.6 to 100,000 workers across all sectors. Distribution of injured people at work by main activity of national economy is illustrated in the **Graph 2**.



Source: Romanian Statistical Yearbook, 2011

**Graph 2**

Table 1

<b>Rate of accident at work on sections/divisions of activity of national economy % 2010</b>	
Mining and quarrying	3,57
Construction	1,82
Real estate	1,33
Administrative and support service activities	1,32
Water supply; sewerage, waste management and decontamination activities	1,27
Transport and storage	1,18
Manufacturing	1,1
Repair and installation of machinery and equipment	1,06
Electric and thermal energy, gas and water production and supply	0,94
Total	0,88

Source: Romanian Statistical Yearbook, 2011

**Table 1** above illustrates the statistics and hierarchy regarding the rates of accidents at work per sector. The figures demonstrate that they are above the rate of accidents for the total economy. The statistics were calculated on accident frequency or number of injured persons per 1,000 employees. It is noted that the rate for “Construction”, with an accident rate of 1,82%, is almost at the head of the hierarchy, only being surpassed by the sector “Mining and quarrying” hovering well above the rate of accidents for the total economy.

Many studies demonstrate that the majority of accidents and resulting injuries in the construction industry are attributed to unsafe work practices of the construction workers rather than unsafe working conditions (Garavan and O’Brien, 2001). This could suggest that the construction sector in Romania could benefit from increased regulations, policies and procedures to increase the safety of construction workers.

The objective of this research was to explore the health and safety improvements on construction sites in Ireland and compare these with the current state-of-play of the construction sector in Romania. Ireland was specifically selected as a benchmark since it is widely accepted that the Health and Safety procedure in Ireland have been progressive and successful in reducing the accident rates on construction sites. Based on the findings in Ireland, an opportunity exists to accelerate improvements in the health and safety performance on construction sites in Romania. ‘Hindsight is a wonderful thing’ – and the lessons learnt in Ireland provide a unique opportunity to fast track health and safety improvements in the construction industry in Romania.

The main findings demonstrate that the safety can be improved through the introduction of safe working systems, enhanced regulation and enforcement, the role of the management and increased staff awareness and training.

## **Key influencing factors**

A systematic review of the literature from journal articles and conference proceedings identified four major prevailing factors that influence the health and safety procedures and practices on construction sites.

### *Nature of work and complexity*

Construction safety related accidents are influenced by the unique and complex nature of its activities (Behm, 2005). Safety in construction is considered complex due to the industry's unique work hazards, rapidly changing conditions and the characteristics of construction organizations (Choudhry and Fang, 2008). Furthermore, construction sites are changeable in nature, constantly changing in status, covering a huge range of construction processes of varying complexity and scale (HSE, 2009). The work processes and people change almost daily on sites and construction sites undergo frequent changes in topography, topology and work conditions throughout the duration of the projects (Rozenfeld, 2008). Construction projects are characterized by many unique factors, such as frequent work team rotations, exposure to various weather conditions, high proportions of unskilled and temporary workers.

### *Work pressures: time and budget*

The construction industry is under constant pressure to reduce costs and at the same time improve quality. This is particularly challenging with rising costs in labor and materials, and in building increasingly complex structures. It is suggested that higher frequencies of construction accidents are registered on projects that were subject to significant budgetary pressures and those that were competitively bid (Hinze, 1998). Research of the Australian construction industry by Holmes, Lingard, Yesilyurt, and De Munk (1999) found that the construction related hazards were largely attributed to the nature of the work, poor individual work practices, ignorance, and work pressure due to budgetary and time constraints.

In an article titled "Pace is the New Peril" Berzon (2008) examined how the accelerated scheduling of construction work was one of the contributing factors to safety problems and accidents. Berzon (2008) identified the underlying problem to be the sacrifice of safety in a rush to finish the job and whereby productiveness is placed before safety.

### *Safety perception*

Behavior among construction workers in particular may be guided by some principles whereby the benefits of unsafe behavior often appear to outweigh those of safe behavior (Zohar & Luria, 2003). Some researchers go even further and argue that safe behavior most often results in non-events, while unsafe behavior appears in most cases to lead to tangible benefits. Baarts (2003) cited that the construction industry is characterized by traditional masculine values such as freedom, independence, resourcefulness, and toughness, with an often informal culture, in which safety knowledge is not openly expressed. This results in safe behavior being inhibited at construction sites whereby project performance goals are often prioritized over safety goals.

### *Health and safety procedures*

In accordance with current legislation, standard policies and procedures for mitigating the risk of accidents rely on increasing workers' safety awareness, through incentives, training, hiring, feedback communication and participation. At the same time a number of coordination and prevention policies, such as erecting temporary protections, guardrails or safety nets, wearing personal protective equipment and planning the coordination of tasks, have to be implemented (Behm, 2008). However, most construction companies consider the hazard identification and evaluation as part of their health and safety procedures, as a burdensome requirement that they must fulfill in order to avoid government fines. As a result, they often neglect the proper implementation of these plans (Saurin, Formoso, & Cambraia, 2008).

### **Research goals and methodology**

The objective of this research was to explore the health and safety improvements on construction sites in Ireland and compare these with the current state-of-play of the construction sector in Romania. Ireland was selected as a benchmark since it is widely accepted that the improvement in health and safety procedure in Ireland have resulted in a reduction of the accident rates on construction sites.

The focus of a recent study in Ireland was to identify any changes in the health and safety procedures and practices on construction sites over the past five years from the construction workers' perspective. The findings in Ireland provide a unique opportunity to implement immediate improvements and accelerate health and safety performance in the construction industry in Romania.

A grounded theory was adopted to identify emerging themes during the data analysis. Related particular pieces of conversation were identified and the common elements were placed under a separate theme. A mixed methodology was adopted for this research. Furthermore it is possible to compare and contrast findings and expand on the knowledge experienced over time. The data for this research was qualitative initially and converted into quantitative form in order to carry out a statistical analysis for the purpose of indentifying themes and trends

This research involved face to face interviews of fifty one construction site personnel with management responsibilities, working for a minimum of five years in the Irish construction industry. The authors performed semi-structured interviews. A total of 51 interviewees were identified for the study. The participants were all in current employment in the construction industry and also studying part-time at third level. The participants were chosen for participation on the basis of the following criteria:

- Currently working in the Irish Construction Industry
- Worked in the Irish Construction Industry for a minimum of 5 years
- Compulsory for candidates to have some element of their work being site based.

The interviewees were from the construction industry and mainly based in the Dublin metropolis. They included site engineer's managers, quantity surveyors and health and safety practitioners. The majority of the cohort was in the 25-35 age group and over 90 % were male. Their company size included very small (1-10 employees), small (11-49 employees), medium (50-250 employees) and large (250+ employees) companies. SME's regarded the above categories as reflective of the economic demographics of Ireland.

### **Limitations**

The primary objective of this present study was to identify any changes in the health and safety procedures and practices on construction sites over the past five years from the construction workers' perspective. Although the statistics used in this study do not represent the attitudes or opinions of all those within the industry, they express the grounds for this study which have arisen from attitudes of those involved in the industry towards health and safety.

A grounded theory was adopted (Corbin, 1990) in order to identify emerging themes during the data analysis. Related particular pieces of conversation were identified and the common elements were placed under a separate theme. It is important to mention that different factors were not expressed equally by all respondents. The interview questionnaire had been developed from a pilot interview and comprised 10 questions that would help understand the operative's experiences over the last five years. The approach used by Mullen (2004) in designing the questionnaire framework allowed respondents to tell their own story in their own way and style.

This research had been conducted in Ireland and the cohort is all in part-time third-level education, along with the interviews having specific focus on the Irish construction industry. The weights and attributes may be strongly influenced by the local environment and culture.

### **Data analysis and results**

According to the literature review, little attempt has been made to research whether health and safety procedures have changed on construction sites over the last five years. This may be surprising, in particular in the context of the relative high accident rates on construction sites globally and the emphasis on strong health and safety regulation and legislation internationally aimed at minimizing accident causation and promoting construction worker's safety. The findings from an Irish perspective are outlined in the following paragraphs.

#### *Health and Safety procedures*

Risk Assessment procedures were in place five years ago for 59% of companies. 82% of the respondents indicated that their companies have changed the Risk Assessment procedures in the last five years. The majority (58%) of the participants believe there has been no relaxation in the current Health and Safety procedures.

Method Statement procedures were in place five years ago for 49% of companies. 64% of the participants' companies have changed their procedures in the last five years. 29% of participants believed Health and Safety is now stricter applied on construction sites. 29% believe there is greater awareness in relation to Health and Safety procedures in the last five years. The research shows that 66% of the participants experienced Safe Working Systems within their organizations. 53% of interviewed construction workers' companies changed their Systems in the last five years. 41% of the interviewees experienced more focus on Safe Working Systems within their organizations in the last five years.

#### *Work pressures*

A large majority (86%) of the interviewed participants experienced a change in external pressures in the last five years. 77% of participants experienced pressures from within their own organizations. The source of the pressure for 75% of participants was believed to be driven by Cost ('Time is Money!'). Over half (59%) of participants also experienced a change in external pressures. 45% of participants state that Health and Safety is more of a concern today than it was five years ago.

#### *Health and Safety inspections*

From the interviewees, 57% did not believe they would receive an inspection on-site five years ago. The majority, 83% of participants, now believe they could receive a HSA inspection in the current climate. The research showed that a majority (69%) of participants state that the belief of a real unannounced HSA inspection to site would change their attitudes towards safety behavior on site.

#### *High Risk activities*

Over half (66%) of interviewees stated that there has been a change in High Risk activities on site, compared with five years ago. Nearly all of those respondents (63%) indicated to have experienced improvements in Health and Safety in relation to High Risk activities and the majority (69%) believed those changes to be positive. The large majority (75%) of participants outlined to have noticed the change in procedures on site around the year 2007.

The majority (79%) of respondents stated that they experienced a change in attitudes to High Risk activities. 69% of participants believe now that the general operative has greater awareness in hazards involved with High Risk activities. 82% believed that the change in attitudes was a positive change. Over half (59%) of participants believe now that operatives are less inclined to put themselves at risk.

### **Discussion and lessons to be learnt**

The results from this study explored the operative's perspective on health and safety procedures and practices on construction sites in Ireland and can form a contribution to further policy making, in particular relating to health and safety procedures and practices. The specific findings in Ireland offer an opportunity to improve health and safety performance on construction sites in Romania.

### *Documentation and Safe Working Systems*

Procedures and rules form the core component of Safety Management systems (Mohamed, 2002). The key contributing factors to the high incidences of construction related accidents, as identified by Haslam et al. (2005), were linked to deficiencies in risk management procedures. The present study showed that 53% of the participants indicated that their companies had changed and modified the Safe Working Systems over the last five years. Three themes emerged from the research data as driving factors for these changes in Safe Working Systems: stricter enforcement, external influences and cost pressures.

This research also identified that 55% of companies experienced more procedures, more documentation and more training relating to health and safety on construction sites over the last five years. The results indicated that 49% of the construction worker's companies did have Method Statement procedures in place five years ago, yet the size of the construction site and nature of the construction project work were a key factor that influenced whether the procedures were in place. The results are largely in line with the findings of Helander (1991), whom found that many of the safety practices are specific to the different job classifications.

Construction workers' attitude towards safety is mainly influenced by their perception of risk, management, safety rules and procedures (Coble and Haupt, 1999). In this research, 41% of participants perceived a stronger focus on Safe Working Systems within their organizations in comparison to five years ago. The research indicated that, in particular, operatives on larger sites carried out Method Statement procedures, while operatives on smaller construction sites carried out such procedures to a lesser extent. When the research results are put in the context of Helander's (1991) findings that construction workers typically underestimate the particular hazards in their work, they can provide new insights on how the motivation for adopting safe working procedures can be positively influenced.

### *Regulation and enforcement*

Many assume that after drafting the regulations, compliance will automatically follow (Amodu, 2008). However, socio-legal researchers indicate that compliance is not a logical consequence of regulatory efforts and achieving better compliance is a difficult task. Even in highly standardized work tasks it is impossible to rigidly follow procedures, since circumstances even in such work vary substantially and a large number of ad hoc adjustments must be made. For example, the findings of this research demonstrate that five years ago (what could be considered the height of the construction boom in Ireland) nearly half of the respondents (47%) stated that there were no procedures in place for carrying out Method Statements, even though this is and was a legal requirement across the industry.



### Size of firm

A significant finding in this research was that the majority of all the participants, particularly those in larger companies, affirmed that no relaxation of Health and Safety procedures was visible. Nearly half the participants believed Health and Safety regulations will be enforced more strictly during a recession, with larger firms experiencing the highest levels of stricter enforcement. Good Health and Safety practices are considered a strong requirement for good public relations in order to obtaining the next job; this is a widely accepted concept amongst the participants of this study.

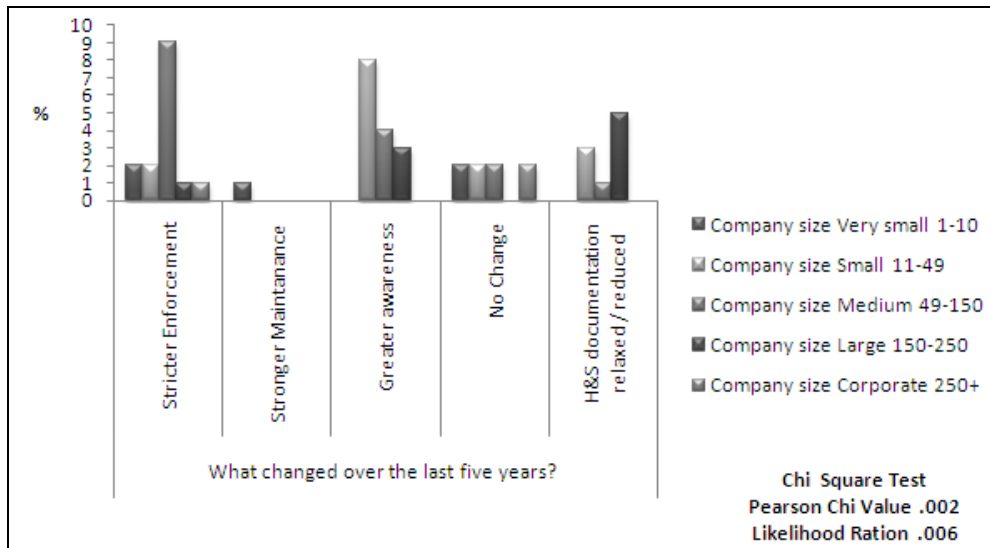


Figure 1. Changes – Size of Firm

As can be seen in Figure 1 above, a small percentage of the participants in this study experienced no change in health and safety procedures compared to five years ago. The participants appear to work mainly with very small and small organizations. This may warrant the question whether Health and Safety procedures and practices were in place five years ago (and still are in place) or whether Health and Safety procedures and practices were perhaps never in place for very small and small organizations.

The research shows that Health and Safety procedures and practices changed and the size of the site was a determining factor. The larger firms appear to strengthening and implement their procedures stricter, while smaller companies tried to avoid the strict implementation of health and safety procedures or keep them to a minimum on smaller sites. A significant finding was that Health and Safety danger were ignored by operatives within smaller/medium organizations. This data validates the findings of Hay (2003) that sites with small numbers of workers have a greater likelihood of serious accidents occurring.

### *Cost pressures and cost of paperwork*

Most construction companies consider the hazard identification and evaluation as part of their health and safety plans, as a burdensome requirement that they must fulfill in order to avoid government fines. Within the findings of this research there are strong indicators to support this statement. Increased costs were cited as the reason for change relating to Risk Assessment procedures over the last five years. The increased costs included the cost of accidents but also the cost of maintaining health and safety systems within an organization. Over 54% believed there is now a significant increase in paperwork relating to Health and Safety procedures.

An interesting perspective was presented by one of the respondents regarding the increased costs for the administration of Health and Safety procedures. The example presented by the participant suggested that the cost element for tendering of potential work should require separate pricing for Health and Safety procedures. Working at height in particular requires pricing for different elements depending upon the work being carried out, such as scaffolding, PPE and harness equipment, which can be costly elements.

Furthermore, the Safety, Health and Welfare at Work Act (2005) requires that employers must release employees for relevant Health and Safety training without a penalty (HSA, 2006). The costs and the resource burden relating to this legal Health and Safety requirement have to be carried by the construction organizations. This corroborates a recurring theme that the implementation of health and safety procedures contributes to an increase in a company's cost base. The Health and Safety related costs include: Safe pass, Construction Skills Certification courses and Basic Scaffolding. Also, renewal costs are to be taken into account and occur at five-year intervals. Other costs associated with both CSCS and Safe-pass would include the cost of releasing employees to attend the training days. In addition, there are significant legal requirements for construction companies to maintain and continuously update all the required Health and Safety documentation.

### *Work pressures*

The findings of this research support previous studies as the participants did indeed experience significant external pressures on site to have increased over the last five years. The common pressure to construction related work is the financial pressure, with most of those interviewed stating that "Time is Money!" This is largely in line with findings by Holmes, Lingard, Yesilyurt and De Munk (1999), that risk on a construction site is largely attributed to budgetary and time constraints

The single most important dimension of safety culture in a construction environment is the role of the managers, through their potentially positive attitudes in reducing the number of unsafe acts by employees and in turn reducing accident rates. The fundamental role and behavior of the manager positively influences employees' involvement and active participation in safety activities (Fernández-Muñiz, 2007).

The majority of those interviewed confirmed to experience work pressures from within their own organizations and nearly all of those experienced increased pressures from their direct line manager. Another significant finding was that five years on, in what can be considered a recession, 34% of the participants stated that time pressures were the predominant concern.

#### *High Risk activities – working at a height*

A study by Gillen (1997) among construction workers who had sustained non-fatal falls, explored their perceptions of the safety climate of the worksite where they were injured, and their perceptions of job demands, decision latitude, and co-worker support as possible contributing factors to the severity of their injuries. Also Helander (1991) stated that many of the safety hazards are specific to the different job classifications and found that construction workers typically underestimate the particular hazards in their work.

In the present study 66% of participants' state that they were involved in High Risk activities on construction sites over the past five years. Only a small percentage experienced deterioration over the last five years in High Risk activities. In contrast, the majority of the participants in this research believed there are significant improvements in Health and Safety procedures and practices for High Risk activities on site.

#### *Awareness, training, attitudes*

A large number of factors determine the employees' attitudes and behaviors with respect to risk, compliance and an organization's safety culture, such as visible commitment to safety by management, workforce participation and ownership of safety problems and solutions, trust between management and employees, good communications and a competent workforce (Fernández-Muñiz et al, 2007).

The findings of this research identified that the majority of the operatives are less inclined to put themselves at risk, in particular in relation to High Risk activities. This result adds merit to the belief that the general operative has a greater awareness of health and safety risks on construction sites. The positive change in the awareness of health and safety risks and changes in attitudes relating to High Risk activities on construction sites may suggest that individual safety behavior has improved compared to five years ago.

Organization's perceptions of legal risk play a far more important role in the organizations behavior than the objective likelihood of legal sanctions (Shapiro, 1999). A majority of construction workers in the present research reported that hearing about legal sanctions against other firms had prompted them to review, and often to take further action to strengthen, their own firm's preventative program.

## Conclusion and future research

The main findings of this study demonstrated that especially the company size predicted site safety behavior (procedures and practices) on construction sites. Most noticeably, the large organizations demonstrated higher levels of compliance to safety procedures and practices on construction sites. Large companies consider good Health and Safety practices a strong requirement for public relations and to obtaining the next job; the medium sized organizations showed signs of regression relating to their efforts to continue to comply with health and safety procedures and practices. Cost was suggested as the main factor and as a result the health and safety related aspects of the business are impacted by ongoing cost pressures. Small organizations reported a low level of compliance to safety procedures and practices on construction sites compared to five years ago. For small companies the cost relating to compliance remains relatively high and the probability of health and safety inspections is perceived low.

Based on the results of this study in the Irish construction industry, the health and safety regulation and enforcement may need to be more tailored to support small and medium sized companies with the implementation of their health and safety procedures.

For health and safety in construction, we highly recommend the development of similar research in Romania that will underpin the improvement of health and safety procedures in Romania. Measures taken in Ireland may be a reference model to support companies in the implementation of their health and safety procedure thus reducing the rate of accidents on construction sites.

The limited available data emphasizes the need to further explore the changes relating to health and safety procedures and practices in the construction industry. In the context of the strong increase in health and safety legislation and regulation in construction sites internationally and the recent globally economic slowdown it is eminent to achieve a better understanding of the changes relating to health and safety procedures and practices in the construction industry.

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# PARTICULARITIES OF DENTAL MEDICAL SERVICES AND CONSUMERS IN THE CONTEXT OF GLOBALIZATION

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## Abstract

*Globalization determines a growth of competition but as well a growth of the opportunity to attract new customers. The dental clinics will have to keep in mind the new characteristics and features of the modern consumer who is more educated, more informed, more active in searching for products and services, more communicative with the providers and the other consumers and more inclined to the cognitive side.*

*At the same time, although they have to admit the traits of the new type of consumer – for whom there are no borders, the clinics must perform marketing researches and be permanently connected to each patient in order to be aware of the particularities of the local communities and even of the individual traits because the present consumer is more demanding and wants unique non-repetitive consumption experiences.*

*For a dental clinic, the globalization supposes a global thinking and global action, not the homogenization of products and services they offer, as well as considering their hybridization, especially from the cultural point of view.*

**Keywords:** globalization, dental medical services, dental marketing

**JEL Classification:** F00, I15, M31

## 1. Introduction

Globalization is a phenomenon widely approached by many specialists from different angles corresponding not only to economic or social sciences but also from art, technological or biological domains.

The present paper embraces the concept of globalization from a point of view concerning marketing theory and medical care services. The authors have been motivated by the results of various previous researches regarding consumers of

dental medical services, by the dynamics of these services in nowadays economy and visible changes at the level of lifestyle and values of modern consumer portrait.

Dental medical services, because of their complexity and their unique characteristics, have a special place in all consumer behavior. The postmodern consumer and globalization are close interrelated concepts influencing each other, at the level of manifestation and even conceptualization. All the changes that occur in everyday life for the postmodern consumer have objective reasons determined by the globalization characteristics (movement of labor forces, global system of trade, high-speed communication systems, etc.). The way that consumers see their own area of interests, their level of satisfaction has changed irrevocably. In this complex frame, their way to be involved in service provision has also changed, postmodern consumers from our time being a kind of architects of their own satisfaction levels.

The present article reveals how far the consumers are willing to go in order to build a system of beliefs, habits, purchase decision, patterns of information, designed to maximize their satisfaction and use the social, economic benefits of technology in medical area.

## **2. Globalization – characteristics and perspectives**

Ever since the 70s, together with the liberalization of commerce of services especially in the field of telecommunications, insurance and banking, it has started the issue of the globalization phenomenon which caught at the beginning the U.S.A. and the developed countries, being far from over nowadays (Mirela Mazil, 2010, p. 135). Globalization influences all countries and purposes of activity.

Globalization is the system of interaction among the countries of the world, in order to develop global economy, referring to the integration of economy and companies worldwide.

Globalization supposes technological, economic, political, cultural exchanges which were possible to the largest extent due to the progress in communication, transportation and infrastructure.

Thomas L. Friedman made popular the term of “flat world”, arguing that the globalization of the trade, the identification of the natural resources in other places than the national perimeter, the change of the supply and the political forces modify permanently the world, both for the best and for the worst. He asserted that the rhythm of the globalization was accelerated and that the impact on the organization of business and the lives would continue to grow (Friedman, Thomas L., 2008, p. 49).

Most of the time, the globalization is deemed as a process of homogenization and standardization. As far as services are concerned, however, where the personnel is important and the consumer has his own consumption culture, this process is sensibly different, since the supplies cannot be homogenized.

Limiting the complexity of the globalization phenomenon, we consider that it is inadequate and probably it would be more adequate to have a perspective to interpret the globalization as a simple hybridization process. The hybridization can



be conceptualized, both at the structural level, as new forms of cooperation, and at the cultural level – through the development of new cultures, as specific mixtures (Jan Nederveen Pieterse, 1994, p. 161). One may talk about an opening of cultural spaces, different exchanges redefining the classical barriers and transforming a new cultural pace through hybridization in something totally different from a simple homogenization of several cultures.

The homogenization, at its core, dilutes the possible differences, imposes a standard and reduces to common denominator the values; the hybridization may seem a concept closer to the way in which the development of the life itself made possible the evolution in all its wonder.

By hybridization, the process of globalization earns some “universality”, comes closer to the natural side of evolution, it is not a mere conglomerate of homogenized cultures but a new hybrid cultural form which combined, in an intelligent manner, the different aspects and intensified their uniqueness through a mutual completion.

The globalization represents, thus, the process of creating connections between the world states, representing the phenomenon by which events and activities deploying in one part of the world are reflected on the companies in other parts of the world (Dunning John H., Hamdani Khalil A., 1997, p. 13).

The suppression of the customs duties, the free movement of people and goods, the transfers of technology, as well as the free penetration on the international markets represent some basic features of globalization.

The process of globalization needs clearly superior raw materials, accessible money resources and state of the art technologies, all of which made available at costs lower than before.

In the field of information technologies and communication, the technological processes play the part of connecting and bringing people closer together, both in time and space, making possible new ways of doing business and changing radically the social interactions.

An essential part in the evolution of globalization and global consumption culture has been played by modernized media, such as satellite television and the Internet. Altogether, globalization stimulated economic growth and implicitly the growth of the standard of living for the people worldwide, as a consequence of the extension of markets, new technologies and original ways of doing business. Hence, the people with the most advantages are the people with large income and university degrees and the way in which globalization is perceived varies according to the people’s capacity to benefit from the opportunities arising.

In the last years, as far as the economic policies promoted by the developing countries and the counters with transition economy are concerned, the liberalization of the commercial flows has been the main topic of discussion. Consequently, almost all the countries have taken measures to eliminate or diminish the instruments pertaining to the direct and control policies of the border transactions. They have larger market mechanisms at the internal level and remodeled or reconstructed institution frameworks including on the financial and labour markets, allowing the free play of the market forces. The countries who had

a better position were able to benefit from new business, trade and investment opportunities, the extension of strategic alliances at the international level, resulting thus in a significant economic growth. On the other hand, the less developed countries, apart from not being able to benefit from the opportunities given by globalization, had to face its effects and look more into it.

### **3. Features of the modern consumer in the context of globalization**

Globalization determined new features of the consumer's behavior, in general (Michael J. Baker, 2003, p. 19-22). In particular, for medical services, one may note among the features of the modern consumer, the following:

- today's consumer is much more educated and has access to more information, being at the same time exposed to the suggestions coming from the group they belong to or the reference group; they are less likely than before to be influenced by the absolute power of the direct communication with the physician or the personnel providing medical and healthcare services. The absolute truth value of the physician's advice and indications is filtered and diminished by the consumer's information experience and the increased capacity to communicate in real time with the members of the group;

- the consumer needs, more than in the past, the others' opinion (as they have the capacity to get it) and additional information; they are more prepared when it comes to purchasing goods or services, hence the need to be more careful in the field of services, for such services to be more tangible and to create a sustainable brand and better communication between the provider and the customer; if the organizations fail to make efforts to communicate better, the consumer will try to get information somewhere else, and such information may be distorted (coming from the competition, for example);

- the global market is much more fragmented and the consumers are more heterogenous. The consumption experiences of each consumer are multiple and varied, and on a global market with harsh competition, where each consumer, although different from the others, the division of the market into consumer segments it is important, that have the same consumption traits on which the same marketing mix acts is no longer achievable with notable results. The culture is different but also the value of history, origins and human nature, personal now, is not considered as belonging to one nation but they are part of the demand of the global consumers who can be friends and have strong and lasting relations with people of any nationality;

- the consumers are more involved in producing goods and services as they are active producers of products and services together with the producers, helping the latter in offering a greater value and a greater consumption satisfaction; the present consumers are more actively involved in the process of introducing products on the market, the consumers creating thus their symbols and becoming loyal consumers of the products for which they participated to the creative process;

- the human subject is a cognitive subject no longer preoccupied with himself but becoming a subject with a greater availability for communication, the

individuals conceive themselves as self-developed and self-constructed. The consumer is no longer the individual who needs to be told what to consume and to be informed on what is new, the present consumer gets involved in creating products and services, in socializing with others and in permanently and rapidly communicating their experiences. They are more involved, more informed, more communicative;

– the present consumer is more exigent and wants unique consumption experiences more than unifying consumption experiences.

#### **4. Particularities of dental medical services in the context of globalization**

The globalization and the technological progress brought about the problem of the concept of e-health and identifying the present role of the organization providing health services within this process. The concept of e-health covers a whole series of complex processes by which the health services are automated not only at the level of the available data about patients but also at the level of medical procedures, GPS technology, etc., in order to deliver remote medical services at minimum costs and maximum interoperability between different national health insurance systems.

Ever since the 60s, the Federal Government of the United States of America has invested millions of Dollars in different ways in the department of the automation and medical information and promotion of telemedicine (Josep M. Piqué, 2010).

The contents of the e-health process is also characterized by the fact that the decision-making processes are based especially on quality information and knowledge, there is a continuity of the medical data and also a continuity of the medical care, and its integration.

There is the possibility of providing free and uniform access to medical information within the network, regardless of the geographical position, one can get online diagnosis in real time from several specialists simultaneously, there is the possibility of providing better quality control of procedures, the almost limitless possibility of storing data, the possibility of sharing data among specialists both for treatment and for examinations, lesser costs, and last but not least, the possibility to implement a better management of the relation with the consumers (Joshua Shemer, 2010).

The practical activity referring to telemedicine may be composed of a series of elements such as: “electronic laboratory”, “electronic prescriptions”, “electronic diagnosis”, tele-ophthalmology, tele-examination, remote monitoring of chronic patients, call-centre for medical support, and customized web site for each patient.

The e-health systems may be appreciated as interoperable, also the electronic prescription systems represent extremely beneficial investments at the economic and social level but in most cases there is a need of capital infusions at the upper level in order for efficient objectives to be reached.

The role of globalization determined by the free movement of goods, people and money will be major in the development of dental medicine. It is no longer

news the participation in specialized conferences of specialists all over the world, by webcams, in real time, without any need of people actually moving. In the near future maybe they will use webcams in the dental practice and a certain dental specialist may advice a different specialist (for example ENT) while their patient is in the room. Also, the patient may have a serious problem and be in a different country and they can call their physician in Romania, and show them on webcam what their afflictions are. The dentist may explain to them the treatment to relief the pain until they come back to the country.

In the last years, ever more, an important part at the level of health services, and implicitly at the level of medical dental services, has been played by the social media communication techniques.

Different types of media, both traditional and social media, condition reciprocally and have a major impact on the marketing activity. Thus one may speak about a parallel between the integrated media concept and the integrated marketing communication concept, the relation between the 2 types of media (traditional and social) being similar, from this point of view, to the relation between publicity and promotion of sales within the same integrated marketing communication strategy (Andrew T. Stephen, Jeff Galak, 2010).

Also, one may say that the media delivery spaces, both traditional and social, are part of an informal network or a delivery system. In this network, the media delivery areas are “knots” and the directional “relations” reflect the influence of one area on the other.

For example a piece of information on a certain topic (let’s say brand) appears on a blog, it may be taken over by a central newspaper and it may appear in its edition the second day. The dynamics of the information is presently very intense at the level of social media networks where millions of users grouped into interest classes communicate on daily and usual basis.

Social media may be defined presently as the use of electronic and internet specific instruments by different people with the view to sharing and discussing information with other individuals.

If at the beginning there was a unidirectional control of information, by pushing the contents towards the user, we can speak now about a “dialogue” by attracting the customer to the message.

The social media communication networks offer now a precious marketing instrument for the specific procedure of medical marketing. The social topics (as those referring to health) are very interesting subjects on blogs, discussion groups, on Twitter, Facebook or LinkedIn. This, together with the importance users give to information coming from friends, etc., as compared to the information coming from the classical channels (a report of AC Nielsen published in 2007 shows that 14 percent of the consumers trusted classical promotion, whereas 78 percent trusted opinions and recommendations coming from other consumers) determine the need to include the medical instruments specific to social media in the marketing strategies of medical institutions (Andrew T. Stephen, Jeff Galak, 2010).

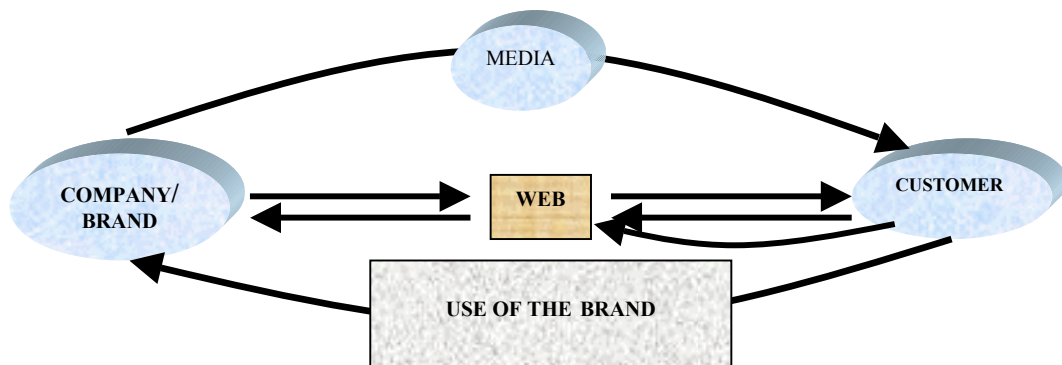


Fig. 1. *The new model of communicating media experience by user generated messages – a two-way dialogue by media channels*

A series of data are revealing for the ever growing potential of internet socializing in the promotion of medical services (Zwick Detlev, Dholakia Nikhilesh, 2004):

- 98 percent of physicians search for information online;
- 85 percent of physicians use the internet before or after the work schedule;
- 49 percent of physicians use internet between the examinations of patients;
- 23 percent of physicians use internet during examinations for certain patients;
- 88 percent of physicians consider the internet as a specific specialty information source;
- 52 percent of physicians currently use smart phones and PDAs;
- SERMO – an online service for physicians has 30,000 members and is increasing;
- 75 percent of the members of this service are physicians with the age over 45.

All these data indicate a very good penetration of internet technology and associated communication at the level of physicians' professional communication. The modern doctor is a highly cultured individual, not only as far as the profession is concerned, who integrated successfully the internet technology in their daily professional preoccupations; this type of social media communication channels, the networking, becomes more important in the context of the relations between the specialists and even the patient and the physician.

Sharing positive or negative experiences about medical services with the help of internet socializing networks is only at the beginning. It is possible that, considering the continuous tendency of internet to become a live informational medium connected to the daily life of each person, to witness an unprecedented development of e-health medical services, combined with the support of the online community of specialists.

More and more dental practices in Romania have created discussion forums and they are present on the social networks, to be available to their patients with answers on dental hygiene matters. At the same time, the consumers in turn may create forums and discussions groups and they may connect with other patients and get information on dental hygiene techniques and dental treatment performed by clinics all over the world.

Due to the globalization, patients may be quickly informed on physicians and their services, they may receive recommendations from other patients and they may get fast at the services provision area.

Thus, there is a new notion – that of dental tourism. In Romania, the number of practices making appointments and schedules in certain periods of the year mainly for foreign patients is ever growing. There are dental clinics that make contracts and agreements with travel tour-operating agencies to combine dental treatment with visiting our country for foreigners.

Also, there are tourism agencies specializing only on dental tourism. Among the advantages offered by such tourism agencies, there are the following: they compare the average dental costs in each country, for each procedure and they are updated and also, they determine a lump price that is lower than the price that the person would get only for travelling; they offer also the possibility to get easily and comfortably to a country where there are less expensive dental treatments; the collaboration between the dental practices and the tourism agency guarantees that the dentists will communicate in English and the tourists will have the guarantee of quality medical dental services. Also, bearing in mind the arguments above, patients may find the dentist with the best recommendations on the most advantageous price.

Each patient may communicate early with the dentist and they can have x-rays and send them electronically so that the dentists schedules them informing them on the length and duration of the treatment, thus the patient will have the time to visit the new country where the dental practice is situated, as well.

Together with the globalization and the new technologies, new ways to approach direct marketing communication at the level of healthcare services – emotional marketing, have arisen.

Hospitals and other healthcare services providing institutions presently operate in a highly computational environment. Many times, the same symptom or affliction may be treated with tens of brands of medicines with equivalent active substances, healing principles, etc.

In this context, the functional benefits or brands in the medical field, such as technology, physicians-researchers or contact personnel are associated with the notion of entry costs. In order to differentiate a brand from the competitors it is necessary to deeply understand the reasons to determine the decisions to purchase and the behavior.

For the medical service provider, the effort to inspire preferences for their own brand represents the emphasis on what really motivates the target audience – basic emotions, such as: denial, anxiety, relief and hope.

These emotions are both positive and negative; they have an enormous impact on patients' actions while they are searching for information on health, assistance or mere care.

The right (correct) message may help in the transformation of denial to comprehension, of anxiety to trust, the evolution of relief to trust and inspire hope and a feeling of personal power.

At the basis of developing an efficient direct marketing strategy there will be the principle by which the emotion motivates the behavior. Thus, the development of a strategy to communicate emotions in a natural manner and help consumers control their emotions and evolve in their complex area represents one of the greatest challenges in the field of marketing, generally, and in the field of health services, especially.

Bearing in mind the fundamental scope of social marketing – the change of the behaviors at the level of the individual and/or society, the application of marketing techniques will envisage not only the change of perceptions for a brand or another but also the emotional behavior, regardless of the loyalty to the brand.

Nonetheless, the promotion of a change in the emotional register of the consumer determined a sincere and natural preference towards the brand inspiring such process.

In the field of health services, due to the complexity of these services, the emotional loyalty is very strong, the decisions to buy and the preferences will be influenced several times by what the patient "feels" and not by what they understand or reason, as far as symptoms, treatment, locations and human interaction.

These behavior modifications, as those described above, represent a desire that should be the background of each procedure which focuses on the provision of medical services.

## **Conclusion**

The way in which the globalization is perceived by each individual and nation separately is reflected both in the standard of living they have and their possibility to face the changes consequent to this phenomenon which evolves continually.

The easier access to the health services, a better communication between the patient and the physician as well as the active involvement of the patients in the medical field makes this phenomenon of globalization both controversial and ample, to the good meaning of the word, the result being the globalized human being, opened to what is new and ready to face any change.

In the promotion of medical services, the use of the Internet plays an important part as far as the consumption behavior is concerned as well as his possibility to select the best services at the most beneficial price.

It would be interesting to see the particularities of the behavior of the Romanian consumer of medical services pursuant to the EU adhesion and the access to a space of the global market.

One must bear in mind that the consumers cannot be homogenized and the dentists must consider that their future depends not only on the Romanian consumer but also on the “global consumer” and that is why they must think globally in order to attract consumers all over the world. At the same time, they must act bearing in mind the particularities of each individual or the particularities of the local community. Even if the globalization has a huge impact due to the elimination of borders between states, it cannot homogenize consumers in the true meaning of the word. In their future researches, the authors propose themselves to identify the particularities of the consumers per local communities and interest groups.

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# NEW PERSPECTIVES IN RELATIONSHIP MARKETING CONCEPTUALIZATION

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## **Abstract**

*Relationship marketing represents a concept that has been disputed in the last 15 years as being a true paradigm of marketing thinking, or just a new method to apply marketing techniques to the new requirements and transformations into the socio-economic field of contemporary economy. Developing the conceptualization of relationship marketing has involved a wide area of research both in the theoretical and practical background. But despite many controversies about how to apply relationship marketing, at a profound level, the openness to new modalities for managing relationships with consumers, in the context of developing a new type of consumer – the postmodern consumer – is one of the undeniable strengths of relationship marketing.*

*The present article is trying to capture some of the possible directions of development of relationship marketing techniques considered by the author as being a kind of future trends of this complex scientific approach. In a brief we consider as appropriate for companies in the consumer markets to develop relationship marketing strategies around the concept of “consumer personal brands basket”. Considering this, every company should try to put together strategic resources and develop common activities with other producers from the brands basket for a certain consumer. Due to the technological development and diminishing costs for management of large and complex consumer databases, developing such a strategic orientation could be not only an illusion but a simple solution for consumers and tomorrow’s competitive environment.*

**Keywords:** *relationship marketing, postmodern consumer, strategic partnerships, consumer brands basket*

**JEL classification:** D11, M31

## **Introduction**

Our century has been a period characterized by a multitude of theories and controversial attempts to deepen, and sometimes change very broad concepts that define the science of marketing. Among these tryouts, a special place is held by marketing theory regarding relationship marketing. Despite different opinions

regarding the role of relationship marketing, its valences in relation to marketing in general, we consider this concept far from reaching its full potential. The technological advances in IT industry and telecommunications industry boost the continuous process of evolving techniques applied in the field of relationship marketing, in the same time the initial concepts and their practical application have been refined and enriched with new valences adapted to the more demanding marketing environment of the companies.

In the next pages we will study these particularities of marketing environment especially from the point of view of consumer markets and by extension we will take a closer look at the relationship marketing techniques and related concepts that help specialists to deal with these changes.

### **Literature review**

As we regard the scientific literature concerning relationship marketing, it becomes visible a certain evolution at the level of relationships and general overview conceptualization.

In the early years of evolving theory in the field of relationship marketing, the main theme was that relationship marketing is concerning only the “supplier – customer dyad” (Berry, 1983, p. 25) being defined as developing, attracting and maintaining customer relationship. Thus, only the relationship between buyer and seller was in the foreground.

Latter, authors like Buttle and Gummesson considered that the scope of relationship marketing is not limited to the above “dyad” but has to be extended to all relationships, network and interactions that may appear in the commercial activity of the organizations (Buttle, 1996; Gummesson, 1999). Thus, the conceptualization of relationship marketing was near to a more current one – “all marketing activities directed towards establishing, developing and maintaining successful relational exchanges” (Hunt S.D., Morgan R.M., 1994).

Gradually, conception of relationship marketing become clearer oriented toward the idea that beside a focus on customer, a company should take into account a diverse range of relations with suppliers, institutions, internal customers, intermediaries, etc.

A wide range of authors, naming a few like Christopher, Kotler, Millman, Doyle, Peck, and others, consider that a company has to develop long-term relationship with all stakeholders’ categories. The relation with the suppliers only is important in the context but it is not the only single element that should be taken into account strategically. It was also at this level that the approach specific to relationship marketing is different to that of traditional marketing – relationship marketing has the capability to deal with a multiplicity of markets. However, despite of this evolution regarding the different views embracing relationship marketing concept, beginning with year 2000, there is a tendency among marketing academicians to divide into two different camps. One of them rely on a broad definition of relationship marketing with a narrow area of application and the other

camp considering relationship marketing from a narrower point of view but with a broader application area (Egan, 2004, p. 251).

Thus renowned specialists such as Parvatiyar and Sheth are considering that relationship marketing refers only to developing activities and programs only in cooperation with immediate and end-user customers, not with a broad area of stakeholders. They put the emphasis on focusing on customer relationships and the process of making them loyal (Parvatiyar, A., Sheth, J.N., 2000).

On the other hand, there are also specialists that consider as a vital condition, the management of relationships with relevant stakeholders in order for the organizations to optimize relationships with customers (Payne et al, 2005; Maxim, 2009).

An interesting point of view is presented by Christian Grönroos, in his book *Service Management and Marketing* (Grönroos, 2007), who believes that customers may have different degrees of transactional or relational approach – namely: transactional mode, active relational mode and passive relational mode. According to these guidelines, customers will have only a transactional behavior, focusing on individualized transaction in time and space, or a relational-like behavior, either active or passive. In our opinion we presume that the mechanism could manifest in two different ways at the level of business customers and individual consumers.

Thereby for business type customers the different approach could be related with a number of factors including: the strategic importance of the buying, the frequency associated with the consumption occasion, the seller relations history, etc. At the level of individual type customers we presume that the above orientations are possible in the context of brands that are not included in the usually customer's evoked set of brands.

Taking into consideration the above Grönroos vision is possible that a certain company has a transactional approach adapted for certain segments of consumers and a relational approach adapted for other segments that require special relational strategies in order to ensure long-term efficiency for the organization.

Therefore, even if there are still controversies about the specific relations between relationship marketing and classical marketing, we may say that the watchword in contemporary marketing approach should be flexibility... and more flexibility.

### **The main assumptions**

Despite the contradictory evolution of the theory regarding relationship marketing approach, marketing techniques based upon the concepts revealed by this evolution are more suited in the present for dealing with postmodern consumers.

The nowadays consumers have been characterized by many specialists from different backgrounds – sociologists, psychologists, economists, philosophers, and off course marketers being a “postmodern consumer”, a kind of consumer personality different in a tremendous manner from earlier consumer generations.

All the rapid changing factors concerning the economic and social environment from the last twenty years have aggregated in the present time a major shift at the very core of social-inter human relations and of course – consumption patterns.

The postmodernism concept refers to an esthetic movement, like a cultural revolution following naturally to the modern period – up in the early '80. Similar to this concept with antecedents in the cultural space, it has been developed another one referring to post-modernity, linked to the substantial changes in the economic field like globalization and development of multinationals, new models of consumption and production.

Being integrated into such a universe, the postmodern consumer represents also an ever-changing reality, connected to all these processes into the economic, social, cultural, technological, ideological field.

In the era of postmodernism, the watchwords have become: individuality, instability and fluidity. Post-modernity represents not rules but choices, different styles, the process that presumes consuming any product from anywhere by any consumer, anytime.

Thus, many authors considered the postmodern period, a period of reevaluation for marketing theory and practice. Firat A.F. and Venkatesh A. proposed a series of characteristics for postmodern marketing, as: hyper-reality, fragmentation, inversed production and consumption, decentralized subjects and juxtaposition of opposites (Firat A.F., Venkatesh A., 2005).

Starting from these elements, we may consider that the portrait for postmodern consumer can be synthesized based on the following considerations:

A. The consumers are connected to a hyper-reality, which presumes an extension for classical services and products in a virtual space. From this point of view – the consumption itself of the “virtual” products presumes different reports at the level of consumer psychic from classical products, the entire consumption act being modeled differently

B. Postmodern consumer is characterized by an exaggerated dynamic of shifting from one consumption experience to another. The changing speed of consumption sources is also determined by different lifestyles, by behaviors corresponding to “social roles” which the current consumer takes them frantically. Each consumer represents in the same time a collection of selves – each of him or her with his/her own preferred brands range. More than that, these social roles are interchangeable and are assumed sequentially by the consumers without a predetermined model.

C. The postmodern consumer is not loyal anymore to the brands of products and services, but rather he is loyal to the images and symbols, and more than that – to those symbols which themselves they create in relationships with brands in question. So, the consumers loyalty is changing at the same time with the symbols change and their interpretation.

D. Unlike the modern consumer, which it was a precisely defined consumer by variables like: occupation, social class, postal code, personality, etc., the postmodern consumer “escapes” all attempts of categorization because of its

characteristics listed above. The postmodern consumer holds a diverse range of purchasing behaviors that perpetual change, also he becomes a marketing mini-specialist, learning to use in his own interest, promotional mechanisms and diverse marketing levers.

E. The postmodern consumer may answer positively to marketing approaches exceeding the old classical orientation based on targeting and positioning. These steps will be based on unconventional methods that leave space for the consumer's creativity, subtle promotional techniques which don't emphasize obvious messages anymore. Unexpected associations between extremes, surprising combinations are elements that are part of everyday cultural language of postmodern consumer.

In a synthetic way, specialists speak of a true "post-shopper" (Baker, 2003, p. 28), this sophisticated buyer with a purchasing behavior characterized by anxiety and multiple roles.

In this context, the characteristics of postmodern consumer make him a difficult target for classical marketing techniques, and it becomes obvious that if we try to make a parallel between the postmodern consumer and the requirements for an effective marketing system, the discussion should start with some of the latest findings regarding efficiency of marketing techniques being integrated into a relationship marketing orientation and aimed to develop and maintain customer loyalty through managing long-term relationships.

As a base for our future below considerations, we find appropriate to start with the techniques related to the concept of one-to-one marketing. One-to-one marketing refers to marketing strategies applied directly to a specific consumer. The specific preferences for a consumer allow companies to develop an entire process for creating products or services with a high degree of customization. The process of implementing a marketing strategy related with the one-to-one approach should have four steps taking into account the opinion of specialists (Peppers, Rogers, Dorf, 1999): identify the customers, differentiate, interacting and customize.

First step, identifying the company's customers consists in contacting a large part of the customers and building a database created taking into account as much information as possible related to the buying and consumption habits, preferences and needs.

The second step concerns the differentiation among customers, having as principles criteria the level of customer value and type of needs.

Thirdly the company should interact with customers using the most efficient channels from the perspective of costs and time consuming activities. Also an important characteristic is related to the constancy of interactions, and developing a sense of continuity for the customer. Every effort of interaction should continue naturally the communication point established earlier.

The last step is considered the customization, involving the mass customization for a manufactured product or personalization of some services around the particular product. This final step is directly correlated with the three steps ahead, because the efficiency of a truly customized offer depends on the

information about customers, the differentiation criteria and the constant interaction.

Although the one-to-one marketing seems to be impossible to implement at the level of some companies, the integration of its principles, at least at a minor level – sale force department, call center, etc., can be very effective in terms of benefits. One-to-one approach raises the problem of strategic resources allocation. What is the business unit that is “in touch” with the customers and is more likely to have results after implementing a one-to-one program? Despite this we may presume that, as other authors conclude, one-to-one marketing based on behavior is more profitable in marketing campaigns (Rodriguez et al, 2012). This means in simple terms that a campaign built on one-to-one marketing principles can be more effective than a classical approach. The promotional objectives, whatever their complexity, can be more reachable if messages are personalized, channels and continuity of marketing communication is taking account of the value of customers, their capacity for response and involvement.

Related with the concept of one-to-one marketing, and other relevant marketing approaches tributaries of relationship marketing, the segmentation of customers can become more efficient when marketers are using the value-based system that is defining for the customer’s lifestyle and conceptions. This system is better to be described using ontologies.

The term ontology, which can be considered as being a taxonomy of terms hierarchically organized having in the same time transversal relations among them, is suited for analyzing the complex range of dynamic elements which reflects the constellation of customer’s personality.

Having a development for web semantic and complex methods of segmentation also conduct to the conclusion that “with the growth of marketing databases and the Internet, the ability to reach customers individually became a viable strategy for a wide range of firms including consumer products companies” (Sorce, P., 2002).

In the present there are companies that take a step further in adapting information technology and internet capabilities in order to provide services related with personalized relationship marketing strategies.

Such companies believe that they can make the relationship marketing approach more effective by incorporating real time personalization (RTP) in organization communications so that there is a much higher degree of relevance and customization based on the customers history and preferences.

In this way, relationship marketing becomes a continuous process that is based on ongoing analysis to determine customer feedback levels, identify trends and create communications, offer opportunities in real time.

For achieving such goals, there are available technology based relationship marketing instruments like: cross media capabilities, personal URL’s, landing webpages, personalized email engines, personalized sms/mms.

Using a cross media campaign, a company has the capability to obtain and integrate data about customers and develop and implement a kind of direct

marketing campaign which is synchronized across multiple communication channels.

Our generic investigation about the present relationship marketing capabilities and concrete evolution show in a clear manner that the concept is far from losing its capacity to deal with nowadays marketing environment requirements. Thus the technological evolution and IT instruments briefly described above in conjunction with the development of social networks are only at the beginning of their full potential development.

Our assumption is that relationship marketing techniques are on the verge to suffer a qualitative jump, and maybe even the relationship marketing paradigm is about to change.

The pressure of postmodern consumer characteristics, the more and more dynamic evolution of world global economy, even the crisis phenomenon, may be the “catalyst” needed for such an evolutionary change.

We propose only at the level of theoretical suppositions a scenario for the next big “change” in relationship marketing conceptualization. Thus, it may be possible soon for different companies that are in forefront of relationship programmers to take a step further and research for the consumers’ usual brands basket. The brands basket we may take into consideration as being represented by the main brands that a particular consumer is loyal to, and take part in his usual buying decision process for a particular long period of time. A company that has the logistics and the motivation to take a step further in its own relationship marketing strategy could investigate this brand basket for the most valuable customers and develop a particular type of relationships with the other brands from the consumer basket. The company may initiate a specific dialog with the potential partners and motivate them to put together strategic resources such as – selling personnel, databases, marketing communication logistics, etc. in order to create a kind of common relationship strategy for the entire consumer brands basket.

The goal should be defining more deeply the consumer personality, the complex relationships that can be established between different consuming acts corresponding to different products and/or services. We consider that the postmodern consumer, the consumer of today and tomorrow is indeed a person with many self-assuming roles and a complex interaction with others’ consuming behavior. Developing such a relationship strategy that offers for the consumer the possibility to know himself better and to interact at an unprecedented level until now with other similar “personalities” could be the peak of marketing driven business philosophy.

## **Conclusions**

Analyzing the very evolution of relationship marketing conceptualization, and even the stages of marketing as a body of knowledge, we have identified a series of characteristics and trends. Taking into account the growth of internet, the structural changes at the level of internet usability and conceptualization degree of the online mass communication paradigm (evolution briefly suggested by the

phrases: web 1.0 – web 2.0 – web 3.0), also the evolution of mobile platforms, the nature of relationships that are the core of relationship marketing has a continuous evolution and dynamic. Thus it becomes a reality and at the same time a necessity, managing relationships with customers that goes beyond simple collection of demographic and customer service data.

The level of technology capabilities and their level of acceptance by the consumers has led to a solid ground for mass customization and synergy of different producers catalyzed by consumer personality.

The concept of consumer brands basket proposed above tries to capture the possibility to define a new level of strategic partnership between brands which apparently have nothing in common, but the value and the meaning that consumers themselves give them.

The complexity of such a demarche is obvious even for larger companies like Apple, or Dell, and so on, companies well-known for their innovative marketing techniques.

Also the implications at the business units and decisional structures represent a large field of investigation.

Future research from different perspectives (managerial one, operational one, customer one, etc.) may polish up and crystallize better the scenario of relationship marketing techniques conceptualization portrayed in the present article. The author expresses his reservations about the development and its application in the absence of adequate cross-section research.

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**Section III**  
**INFORMATICS**



# THE MANAGEMENT OF ONLINE RESOURCES AND LONG-TERM SAVING OF ELECTRONIC DOCUMENTS BY TRANSFER INTO THE DIGITAL SPACE

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## **Abstract**

*Information is a rare and expensive resource, therefore it needs to be pointed at, appreciated and evaluated. In terms of the specific issue of multiple use, the process of generating and use has to be placed in a subordinate position compared to the management level, thus making up and updating via a particular strategy a list of the available information.*

*The development of the activity generates documents that, on their turn, go through several stages to be presented for approval, approved and sent to the beneficiary. A system of managing the flows and documents provides an easy and quick access to the stored information, assists each employee to organize his activity with the documents and to manage the data in an unitary way.*

*The electronic archive refers to the electronic storage system, along with the totality of electronic-type stored documents, while using as storage support any environment that can support storing and from which an electronic document can be presented.*

**Keywords:** *information management, electronic-type document, holder of document ownership right, integrity and confidentiality of documents*

**JEL Classification:** M15, M54, O17

## **Introduction**

The concept of information management relies on the all-agreed opinion that the informational resources represent an asset in a company, therefore they can and should be managed.

Information is a rare and expensive resource, therefore it needs to be pointed at, appreciated and evaluated. In terms of the specific issue of multiple use, the process of generating and use has to be placed in a subordinate position compared to the management level, thus making up and updating via a particular strategy a list of the available information.

The information management involves carrying out specific activities, such as: initiating and updating strategic projects in the online environment, implementing certain coherent solutions, definition and compliance with standards of collection, distribution, processing and storage of data, high-level assistance for the end users.

This activity must become a priority of the economic agents, while the manager becomes a catalyst of information, effectively involving himself into the inclusion, administration and updating of the pertinent information, of thousand of available data.

### **Literature review**

In Romania, the adoption process of document management solutions is in full expansion, about 10% of large companies use this type of application, [Nicolescu, O., 2006], this figures are small compared with EU countries, where the rate approaches 30%, [Boulescu, M., 2009], being important the changing mentality and the fact that managers have become aware of the importance of adopting document management solutions.

At this point it is a fact that most romanian companies use databases and archives as files on paper support. These are changing gradually by their transffer on electronic support into structured databases, [Mareş, MD.,2009].

Under a dynamic business environment and increasing flow of information circulating both within an organization and externally, [Popescu, V., 2009], A powerful documents and knowledge management system essentially influence the management of working time.

At the level of this study, authors summarizing the main results of studies taken, treats the main formal information flow involving the three major players (economic agent, electronic archiving services provider and Regulatory and supervisory Authority).

It is considered useful for the economic agent to use certified electronic documents management services wich are capable to ensure integrity, security, privacy, confidentiality through security systems approved, making easier in the same time the activity at the level of their own structural compartments.

### **The development of the actual documents in the field of the online resources**

The development of the activity generates documents that, on their turn, go through several stages to be presented for approval, approved and sent to the beneficiary. A system of managing the flows and documents provides an easy and quick access to the stored information, a management of the non-structured information, assists each employee to organize his activity with the documents and to manage the data in a unitary way.

We notice the fact that, by secured solutions of flows and documents management, the aim is to avoid the online overloading, to locate the valuable information in a short time, to filter and store the information in a sure way.

The legal framework regarding the archiving electronic documents is given by the Act nr. 135/15.05.2007, and the authority of regulating and supervising is the Department of Communications and Information Technology.

The field of providing electronic archiving services does not need a beforehand authorization, and the people intending to provide services of electronic storage will have to notify the Authority of regulation and supervision 30 days before the starting data of their activity.

This moment, all the information concerning the security and saving procedures will be notified about. Should an intention of changing the above procedures is present during the activity of electronic storage, this needs to be notified to the Authority of regulation and supervision at least 10 days prior that action (in compliance with the Act 135-2007).

### **The realization of the E-Archives**

The *E-Archives* electronic storage services may be accessed by any person, either natural or legal.

The electronic archive refers to the electronic storage system, along with the totality of electronic-type stored documents, while using as storage support any environment that can support storing and from which an electronic document can be presented.

The electronic archiving system is managed by the administrator of electronic archive, namely by the natural or legal person assigned to by the Authority of regulation and supervision. The archive administrator is responsible for the online system that is meant to collect, store, organize and catalogue the electronic documents in order to preserve, consult and present them.

It is evident that the holder of the disposition title upon the document decides, in compliance with the current legislation, on the access conditions to the document. The access conditions to the document represent the degree of access that is granted by the document owner, a natural or legal person who holds the ownership title or who issued the document.

The building of the electronic archive is done by following certain conditions applied to receiving a document to be electronically archived. Some of the conditions are shown below:

- ◆ The document in an electronic form needs to be signed with the extended electronic signature of the holder of the disposition right upon the document. At this moment, the electronic signature is to be checked for validity;

- ◆ The encoding and decoding key for the coded documents be given for the documents that fall under the jurisdiction of Act of National Archives nr. 16/1996, with its further modifications and additions;

- ◆ Information about the document owner should be sent, its issuer, the holder of the disposition right upon the document, background of the document, the type of document, the level of document classification, the digital format in which the document is archived, the key words that are necessary to identify the document, the localization elements of the technical support, the single identifier of the document, the issuance date, the archiving date, the deadline of document saving.

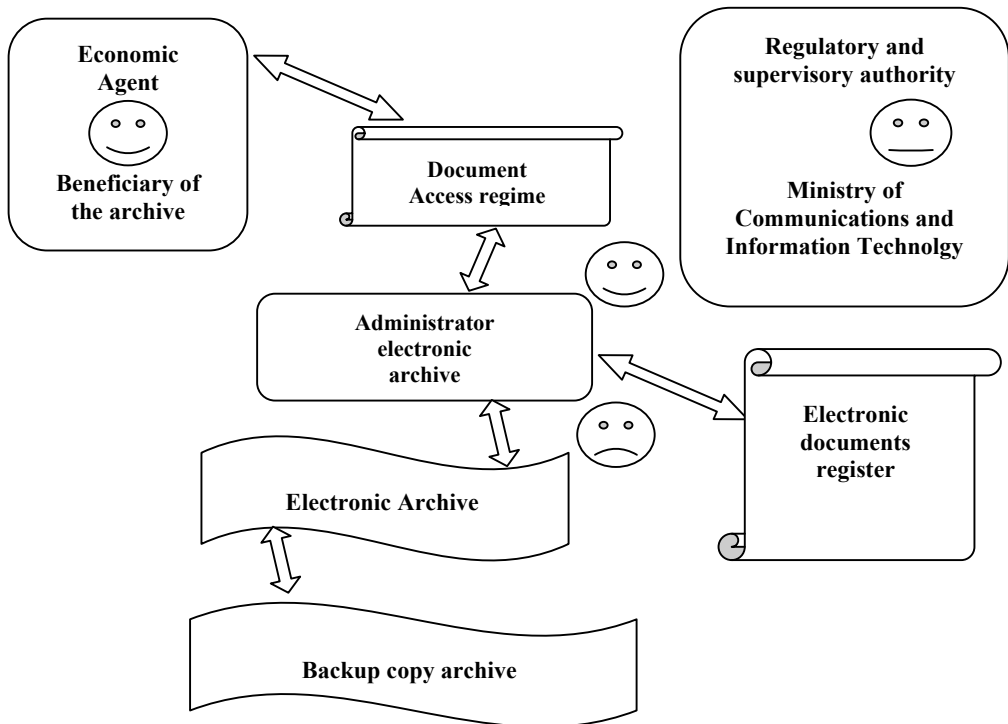


Fig. 1. *Information flow in the economic agent-provider of electronic archiving service – Regulation authority equation*

In compliance with the procedure, the documents archiving is initiated the moment when the electronic document fulfills all the conditions above-mentioned. The archiving is certified by the administrator of the electronic archive by his own electronic signature. Thus, the administrator confirms that the document is original or a copy, according to the decision taken by the holder of disposition right upon the document. The electronic document, such identified, is archived in the location established by the administrator of the electronic archive.

The archived documents are listed in the Electronic Register, compiled by the administrator of the electronic archive, and the access to this register is public only for the documents for which the holder of the disposition right has set forth conditions of public access.

The graphic representation below tracks the formal information flow to which three major actors take part (the economic agent that benefits from the service, the provider of the electronic archiving service and the Authority of regulation and supervision).



The manner of access to an electronic document, the consultation of archive is exclusively established by the holder of the disposition right upon the document via a document, which will be signed by both the holder of the disposition right and by the administrator of the electronic archive.

The conditions of the access to an electronic document are set forth by the holder of the disposition right upon the document, as this person is directly responsible for this; as for compliance with the conditions of access to the electronic document, both during archiving and for granting access to the document, the administrator of the electronic archive is the person in charge.

The preservation of the electronic archive is the duty of the archive administrator.

The main tasks are as such: saving the source code of all the programs used to build and exploit the electronic archive, in electronically signed and classified files; filing with the National Archives of a copy of the source code; providing archive maintenance; making available computer-based programs, which will allow the shifting of any archived document from the initial format into a format that will permit that document to be visualized, reproduced and stored.

The archive administrator will have to create an archive safety copy that will include all the archived electronic documents, constantly off-line updated.

## **Conclusions**

It is obvious that the administrator of the electronic archive needs to guarantee for the integrity, security and confidentiality of the documents by using a homologated security system. When the archiving period of the document is expired, the administrator will destroy the document.

The electronic archives are stored in data centers that are subjected to beforehand approval, in compliance with the norms regarding the integrity and security of the electronic documents; security and integrity of the space filled with the equipment hosting the electronic archives; the information recovery following the natural disasters.

When the administrator of the archive intends to end his activity, he will notify the Regulation Authority about it at least 60 days prior to this ending date. In terms of the archived documents until that date, we cannot fail to notice the duty of the administrator to transfer the electronic archive to another provider of archiving services, upon being approved by the Regulation Authority.

The authors assent to the fact that, for an economic agent, the electronic archiving via an authorized administrator is a way to facilitate his activity of his own structural compartments.

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# NUMERICAL MODELING AND SIMULATION IN VARIOUS PROCESSES

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## Abstract

*The modeling and simulating of the economic processes is situated at the border of mathematics and technique of calculation. It deals with the substantiation of the managerial decision with efficiency for the producer, with the help of some flexible economic-mathematics models; they also offer the possibility of using the simulation technique.*

*The economic modeling offers the manager the rigorous side of his actions, multiple chances in order to connect existing resources with the objectives pursued for a certain period of time, offering the possibility of a better and faster thinking and deciding process, without deforming the reality.*

**Keywords:** *modeling, simulation, economic processes*

**JEL Classification:** C63

## Introduction

The purpose of the paper is to present the possibility of using the web services in multiple applications, stressing the advantages brought by this technology. The first part describes the technology and then we expose a series of possible flexible scenarios, which detail the functioning way and the response time.

The distributed systems generally are rich in structured knowledge, not so complex and do not imply behavioral relations among users.

The application is oriented on many different types of users (managers, economics analysts, specialists in informatics, specialists in mathematics, specialists in physics and simulations); it can be used as a working tool in studies of analyses based on numerical values, resulted from questionnaires, case studies.

It is recommended against other applications due to its possibility to be accessed online by many users simultaneously, that can receive the results in the real time. The application contains a multitude of functions from which the users choose only the necessary ones.

The efficiency of the accessible research platforms via web technologies can be proved, taking into account the following factors:

- instructors: the capacity of implying users, the degree of knowing the application;

- the computers network: hardware performances, transfer speed, the functioning state;
- the used platform: a facile usage both for instructors and for users, reducing the errors at a minimum number;
- the content in the digital format: the scientific accuracy, the attractiveness, the interactivity, attribute which determines the users to remain connected and scan the contents.

The components use standardized interfaces and have a high level of self protection, because the component part subsequent way of usage cannot be anticipated once with its creation.

In distributed applications, the objects state represents a critic element. The distributed components contain distributed objects. The role of the distributed objects is presented furthermore. The concept of distributed objects is referring to existing objects in a different space addresses and whose methods can be appealed by remote methods.

The specific activity for distributed systems development stands for projecting the system architecture, dividing the responsibilities between the system components and placing them on the network computers. The most known and used architecture is the model client/server, but there are also: supplying services on many servers, proxy servers, caching technique, pair processes and others.

Analyzing these architecture models after their functioning principle, we can make a comparison among them. The tasks are better divided into client process and server process, by changing messages in order to fulfill an activity. The set of objects which a service is based on can be partitioned and distributed on many servers. The cache technique is used largely in practice activities, the web browsers keep for every client a cache with the most recent visited pages and other web resources; they use a special HTTP request through which it is verified if the cache pages correspond with the original ones on the server.

### **Literature review**

Currently the information society is a kind of information society in which the production and consumption is the most important type of activity. Information is recognized as the main source for information technology and communications, which are the basic technologies, and environmental information with social and ecological environment as a human environment. Also with the transition to an information society, a new distributed system is widely used; it facilitates the access to a wide variety of resources. Resources can be computers, storage, network links, software, etc.

These themes were approached by many specialists, each of them contributing to the field development with specific concepts and researches. For a general view, we studied the most recent ones. As the modeling is concerned, the solutions are to be found in Abdul A. R. and Pilouk M. works (Abdul & Pilouk,

2008); the usage of the web services was focused by Hansen M.D., referring especially at SOA (Hansen M.D., 2007); for the Ajax technology a useful guide is the work of Holdener A.T. (Holdener A.T., 2008); for practical applications oriented toward businesses and not only, the main work is that of Iyengar A., Jessani V., Chilanti M., *WebSphere Business integration Primer, Process Server, BPEL, SCA and SOA* (Iyengar A., Jessani V., Chilanti M., 2008).

### **Theoretical background**

The simulation (Abdul & Pilouk, 2008, p. 109-120) is a technique of realizing the experiments with the numeric calculator, which implies the construction of some mathematical and logical models that can describe the behavior of a real system for a longer period of time. The simulation (Hansen, 2007, pp. 340-349) is an efficient research technique for the complex economic problems at a firm level, impossible to be studied in an analytic manner. Within the simulation activity, there are implied three important elements, namely: the real system / the model / the computer and two types of relations: modeling and simulating relations.

“The real system” represents the system felt with our senses. “The real model” represents the real system replaced which corresponds to the requirements of the initial real system. “The abstract model” realizes the passing from the “real system” to “the real model”. It reproduces the real system through the decomposing of the real system into elementary component parts and establishes the connections between them.

The numerical methods of calculation are practical, efficient and elegant (Abdul & Pilouk, 2008, p. 130-135), the achievement of a own web architecture will contribute significantly to this.

There are seven groups of elementary structures: vectors and matrices, algebraic evaluations, linear algebra, analytical evaluations, analytical problems, special functions, approaching and interpolation.

The digital technologies introduced on the market by the Web technology; this completely fulfils all the requests connected with the information cost, stocking and spreading (Couluoris, 2001, p. 29-61). From this first steps where the sites were simple visiting cards, iterative processes have been created and developed. At the same time with the transition to an informational society, a novelty is represented by the distributed systems of big dimensions, which facilitates the access to a great variety of resources (Holdener, 2008, p. 22-34).

In the following study, I will use the book Numerical Library in Java for Scientists and Engineers. It offers for each subject a general discussion, a certain amount of mathematical analysis (Hansen, 2007, p. 329-332), a certain discussion of algorithm and the most important, the implementation of these ideas in a real mode, as routines. There is a proper equilibrium among these ingredients for each subject.

There are seven groups of elementary structures: vectors and matrices, algebraic evaluations, linear algebra, analytical evaluations, analytical problems, special functions, approaching and interpolation.

Each group was analyzed. Based on these analyzes we conducted a series of scenarios useful in process simulation. Such a scenario is presented in figure below:

The resolving of the parabolic and hyperbolic equations (using the function **Ark**):

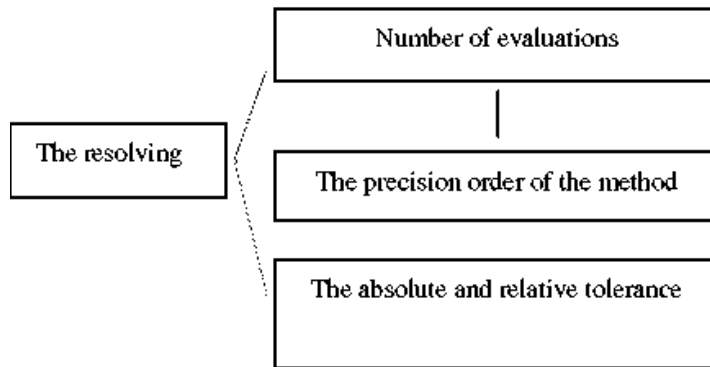


Fig 1. *The graphic representation of the scenario for the resolving of the parabolic and hyperbolic equations*

Used procedures:

- a) the initialization of a vector after certain constants;
- b) vectors with multiple setting forms;
- c) factors for multiplication;
- d) duplicate elements in a vector;
- e) the product of an element belonging to a vector and other element belonging to another vector;
- f) adding a multiple constant from a vector to other element from another vector being in a certain state;
- g) the resolving of the systems of linear equations.

This creates scenarios for each group and for each function of the group. Test results were so encouraging and conclusions that can be drawn after the realization and use of these scenarios are stated below:

- a) the possibility of resolving problems of great dimensions which do not go in the client computer memory;
- b) the identification of the common costs;
- c) the reducing of the costs;
- d) the reducing of the response time;
- e) the client can be involved in the problem description.

The computer's simulations seem to be the most efficient methods of using the computers in economics. The contribution of economic science to society development is essential. The great discoveries were realized with empirical

methods, but nowadays the technology of the information, which seems to be one of the most efficient methods, is used not only in economics, but also in other research fields. The created web service connects the informatics technology with the economics.

### Methods and techniques

From the multitude of methods, we firstly refer to the method of the analysis of the critic way which detaches of all of them. It handles the arbitrators with useful tools for analyzing, organizing and ruling of the complex actions; it marks out the place of the decisional activity within the assembly of the complex action.

The mathematical logic introduces and uses logic forms and calculations in order to deduce the rules of the correct thinking and their application for constructing correct reasoning. (Hochgurtel B., 2003, p. 92-115).

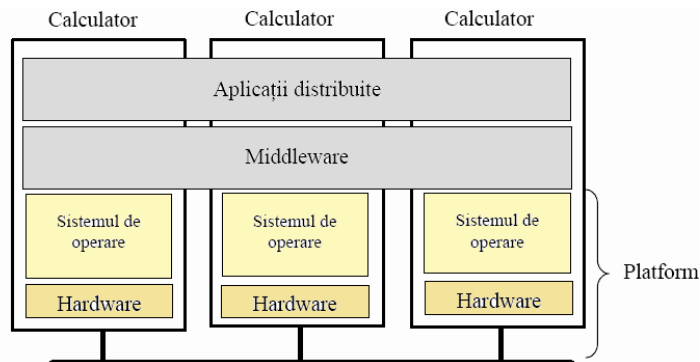
The passing from an interface of the type line command with the user, to an interface based on the web services represents a great advantage because it allows the combination and the usage of some procedures – routines – prior defined.

These characteristics and the projection aspects of the distributed systems can be described as descriptive models (Hurwitz & Bloor & Baroudi & Kaufman, 2007, p. 20-25).

Each and every model will represent an abstract, simplified but consistent description of the relevant aspects of the distributed systems.

For these, the hardware component is important, but the software has a determinant role.

The most known structure is the hierarchical structure on modules. The following figure shows the general structure (Abdul & Pilouk, 2008, p. 25-107) of a distributed system.



Source: <http://koolkampus.com/engineering-notes-1/information-technology/software-concepts-middleware/>

Fig 2. The general structure of a distributed system

In order to exemplify this, we present the Efrk function (Hang. T. L., 2004, p. 483-492). Thus, we can determine the minimum of the respective function. The function service is created on the Eclipse platform and it is realized in Java language.

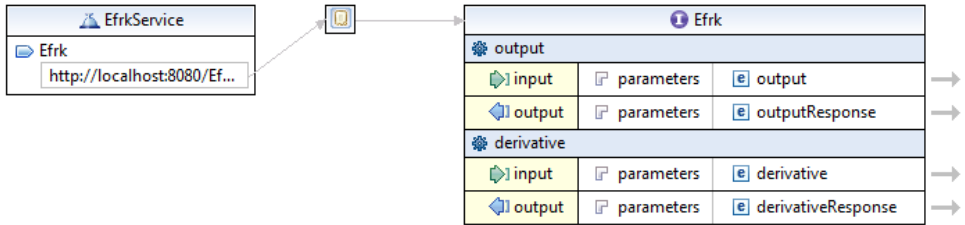


Fig. 3. *Efrk WSDL*

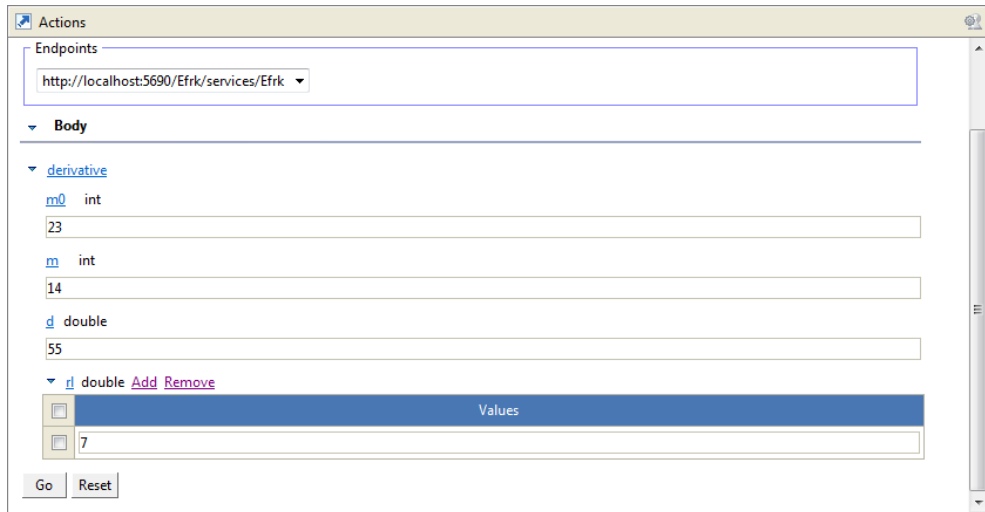


Fig. 4. *The launching of the web service for Efrk function*



Fig. 5. *The response time for Efrk function*

By respecting and adapting the design of these types of functions and mathematical calculation, any process can be adapted for virtually each formula, using both as distributed systems and Web services based on numerical calculation.



## Conclusions

Process simulation is an area with great potential, both for development and scientific studies. They involve a number of issues and roles. The subject interests large categories of scientific preoccupations. The economic modeling offers the manager “the rule of managing”, multiple possibilities to correlate the existent resources with the aimed objectives for a certain period of time.

Mathematical modeling of this aspect of the decision is made by numerical calculation that is application adapted.

The advantages this method brings to the users consist in: the possibility the user has to use them again within other applications; the shape reconfiguration depending on the case study; the reduction of the time and implied cost; the possibility of a simultaneous usage by several users at the same time, all of them receiving the responses required in a real time.

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# THE INTERROGATION OF THE OLAP CUBE BY USING MULTIDIMENSIONAL ANALYSES

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## **Abstract**

*The present paper proposes to speak about the interrogation of the OLAP cubes, by using the multidimensional analyses. The first part of the paper deals with the dynamics of the business environment, a fact which triggers the necessity of the informatics systems for decision assistance. The second point of the paper is the presentation of the online analytical processing (OLAP). Connected to this point is the declarative interrogation language MDX, which assures the access to the OLAP interrogation, functions, offering us the possibility of defining the calculated members of the dimensions. A few examples show us how they work. In the end, we draw the conclusions, stressing the importance and the benefits of the intelligent solutions.*

**Keywords:** *interrogation, OLAP cube, MDX language, multi-dimensional analysis*

**JEL Classification:** C81

## **Introduction**

The unprecedented dynamic of the business environment exposes today the decision makers in front of situations where the informatics systems for decision assistance are indispensable. Within the economic financial environment, the decision is a key element, which has to manifest fully, being a rational element of choosing the optimal variant as concern the financing process and the investments.

The importance of the decision will influence the whole informational circuit which derives from the fact that the objective of each decision has a financial character; it mainly consists in increasing the capitalization, the profitability, assuring a permanent availability of cash, the risk avoidance; all these aspects could impose the firm as a leader of the market.

## **Literature review**

The administration decision represents the main instrument for realizing the established objectives for a certain period of time [Ion-Trifoi G., Dinte C.]. Thus,

an increasing attention is given to the instruments the decision makers operate with, because beginning with the projection stage of the informatics systems we have to take into consideration all elements which influence the decisional process.

The data cube represents a data structure which makes the measure aggregation after the levels and the hierarchies of each dimension we want to analyze [<http://office.microsoft.com>].

The cubes combine more dimensions with synthesized data. The cubes are not cubes in a mathematic sense, because they do not have necessarily the equal sides, but they represent a good way of describing a complex generic concept.

The online analytical processing (OLAP – On-Line Analytical Processing) is comprised in the sphere of the managers' current activity. The results of the OLAP investigations are realized through data multidimensional analyses and are materialized into concrete, consistent, correct and in real time responses to the analyses questions about phenomena, processes and activities. The main OLAP operations which can be done are the following: the specification of the selection criteria, the rotations, the changing of the aggregation level and the specification of the representation manner.

Among analyses and multidimensional presentations, within the OLAP technology [Lungu, I. et al., 2007], some of the authors of the specific literature also included the informatics systems for the executive support (ESS), but also the data mining (Data Mining). OLAP assures multidimensional conceptual views of the data. The data models associated to the OLAP systems comprise two categories [Muntean, M., 2004]: *extensions of the relational data model* (the Kimball model, the Gary model, the Gyssens și Lakshmanan model, the Test model, the Li and Wang model, etc.) and *models based on n-dimension cubes* (the Agrawal model, Gupta and Sarawagi model, the Cabbibo and Torlone model, the Blaschka model, the MAC model, the Vassiliadis model, the Guazzo model, etc.).

### **The declarative interrogation language within the OLAP cube**

The data representation is a maximal importance point of the OLAP systems, because here there are evidenced all the information behind an immense data volume. The ways of representing the multifunctional data are reported to: the data visualization, their navigation and format.

The existence of great volumes of data leads to the implementation of the modern stocking method that is the data warehouse. A solution for passing from the relational data bases to the transactional data bases is with the help of the SQL server. It is the central element and the interrogation source for obtaining the reports and graphics. Each OLAP instrument has as the start point the table and the more performing and efficient it wants to be, the more complex and various graphic representations it will offer. Many modern instruments present the final information in the bi and tri dimension graphs or allow the multi cub visualization. The cube is practically the place where all data which are to be exposed in a board table are calculated and aggregated.

The declarative interrogation language MDX (*MultiDimensional eXpressions*) assures the access to the OLAP interrogation functions, offering us the possibility of defining the calculated members of the dimensions. Microsoft SQL Server 2008 gives a new dimension to the usage of MDX, by manipulating and finding the multidimensional data bases. The language uses expressions compound by identifiers, values, instructions, functions and operators; with their help the Microsoft Analysis Services can make evaluations for finding an object or a scalar value, represented by a row or number. MDX is a language for interrogating the multidimensional data bases, administrated by the OLAP type servers. In its essence, MDX is capable of sending specific interrogations to the server and obtain different results, under the form of data structures well defined.

The multidimensional MDX expressions realize interrogations over the cubes and return multitude of multidimensional cells which contain cube data. For each and every expression, we can use unique names for the calculated members for eliminating all the ambiguities. In order to identify data, the MDX uses the reference system.

It can identify in a unique manner a cell. A cell in a multidimensional cube is the space determined by the junction of a member of the dimension and a member which came from the attributes hierarchy of the respective cube. A member in a dimension can be: the leaf member, a parent member, a data member or the calculated value of all members.

The MDX interrogations look like the SQL interrogations and require a data request (clause SELECT), a starting point (clause FROM) and a filter (clause WHERE). These instructions will facilitate the extraction of specific parts in an analyzed cube. MDX also offer a great set of functions for manipulating the data, as well as the ability to extend the MDX with the functions defined by the user. There are specific commands for creating or erasing cubes, dimensions, measures or other subordinated objects. The scope of the MDX expressions is that of facilitating the data accessing from many dimensions. The SQL language uses two dimensions: column dimension and row dimension. Within every table, at the row and column junction, there is a single data element, called the field. Within the multidimensional data comprised in a cube, the structure presents multiple dimensions. The junction of the dimensions in a cube determines the measure, which has one or more elements of data type. Each dimension can be detailed on certain levels, which, in their turn, contain members. The common components of the MDX include: tuple, axes and multitude. In order to identify and extract data, the MDX language uses a reference system, called tuple. It represents a collection of members, each of them being selected from a dimension.

The syntax for a tuple is:

- *[Dimension].[ Member]* – for a single member and a single dimension;
- *([Dimension\_1].[ Member], [Dimension\_2].[ Member]... [Dimension\_n].[ Member])* – for many members and dimensions.

The general syntax of the MDX SELECT instruction is the following:

**[WITH <SELECT WITH clause> [,<SELECT WITH clause> ...]]  
SELECT [\*] (<SELECT interrogation axe clause> [,<SELECT clause  
interrogation> ...] (FROM <SELECT clause cube name> [ < SELECT clause  
axe section>] [< SELECT clause cell properties>].**

The key word WITH is optional. In order to define a value domain (Range), one can use the "..." sign; it has the role to unite the extremities. The first 5 axes have been standardized, having the following predefined values: X axis – ON COLUMNS, Y axis – ON ROWS, Z axis – ON PAGES, V axis – ON CHAPTERS and W axis – ON SECTIONS.

The junction of multiple tuples is another tuple. Unlike the relational model, where the tuples of a table have the same structure, within the multidimensional model, it is possible for us to obtain tuple with a different structure after an interrogation.

### **The usage of the MDX language**

#### ***Example no. 1***

– MDX interrogation to find out which are the selling in the Muntenia and Transylvania regions for the MAN, VOLVO and IVECO trucks.

```
SELECT {[Trucks].[Name Class].&[MAN],[Trucks].[Name  
Class].&[VOLVO],[Trucks].[Name Class].&[IVECO]}  
ON ROWS, {[Shops].[Region].&[Muntenia],[Shops].[Region].&[Transylvania]}  
ON COLUMNS FROM CARS_CUBE
```

Any axis nominates a collection of members derived from one or more dimensions. The filtering of the specific cube values along the members with associated values represents the way of constructing the axes. During an interrogation, the syntax of an axis will use the axis specification after the key word SELECT. A set is comprised between accolade parentheses, within the same instruction SELECT and nominates those cube cells whose values are to be returned under the form of a response to the interrogation.

The sets are tuples collections both on rows and on columns that is we have valid tuples on the both axes. On the basis of all MDX interrogations is the SELECT instruction. An MDX interrogation has as definite: the number of axes, the members of every dimension, the name of the interrogated cube and the members of the sectioned axis.

The general structure [Spofford, G., Harinath S., Webb C., 2006] of an MDX interrogation consists in:

- ✓ *The key word SELECT*: it is the word which initializes any interrogation;
- ✓ *Axes where the results of the interrogation are obtained* (maximum 128): the words ON designate the columns axis (COLUMNS) and the line axis (ROWS). Usually, the results of the MDX interrogations are represented in a bi dimensional form, but there can be also the third dimension (PAGES), or even further dimensions (CHAPTERS, SECTIONS).

- ✓ *Accolades* {,}, which designate the definition of a set of elements in a dimension or a set of dimensions. The elements in a set are separated by commas and the names within a hierarchy are included between square parentheses [,].
- ✓ *Clause FROM*, which specifies the name of the data cube, from where we can obtain the interrogation results. It is important to mention that MDX is not a language of a CASE-sensitive type, which is of no importance if we write the names in uppercase or lowercase letters.
- ✓ *Clause WHERE*, is the one which allow the user specify the conditions referring to the data set which is to be introduced into the result. This clause is an optional one.

### **Example no. 2**

–an MDX interrogation which presents the number of cars with the acquisition value between 180000 and 250000 Euros, sold between the years 2009-2010: `SELECT {[Data].[time].[an].&[2009];[Data].[time].[an].&[2010]} ON COLUMNS, {[Cars].[Value].&[180000];[Cars].[Value].&[250000]} ON ROWS FROM CARS_CUBE WHERE [Measures].[Selling Count]`

### **Example no. 3**

In order to determine the value of the annual expenses for every shop in every locality, we can apply the following MDX interrogation.

```
SELECT {[Data].[time].[an].MEMBERS} ON COLUMNS,
{[Shops].[Locality].MEMBERS} ON ROWS
FROM CARS_CUBE WHERE {[Measures].[Expenses]}
```

On the column axis, a list with the values of the level [year] are to be generated and on the line axis will appear a list of the level [Shops][Locality].

### **Example no. 4**

If there is necessary the obtaining of a centralized situation of the previous values, we can use the indicator of supplementary selection SELF\_AND\_BEFORE, which presents the required values. If in our example, we want information about Dobrogea region,

```
SELECT {[Trucks].[Name Class].MEMBERS}
ON COLUMNS, {DESCENDANTS ([Clients].[Clients income].[Ad
Region].&[Dobrogea],[Clients].[Annual Income],
SELF_AND_BEFORE)} ON ROWS FROM CARS_CUBE WHERE
[Measures].[Selling Count]
```

Thus, we will obtain the synthetic value of the sellings for Dobrogea “parent”.

The calculating operations in the MDX language make recurrence on members’ functions which access every member of a dimension and return a member or a zero result. The strong point of the MDX language is represented by the generation of the calculated members grouped into permanent and virtual members. The used operators are: “accolade parentheses”, “:” and “.” From the member functions, we mention: *.Parent* which returns the parent of the specified

member; *.Children* which returns the child of the specified source member; *Ancestor* ( ) finds out a member on a level or on a distance: the parent, the grandparent, for the specified source member; *Cousin* ( ) begins with the members order and position on the levels of a dimension in a hierarchical structure and returns the child member which take the same relative position under a parent member; *FirstChild* returns the first child of the specified member; *.LastChild* returns the last child of the specified member; *.FirstSibling* operates with the concept of horizontal order of the hierarchical data structure; *.LastSibling* operates with the concept of horizontal order of the hierarchical data structure, thus the member which is the last child on the horizontal level will be the last brother for any other member at the same level.

Any interrogation addressed to the data cube has as a result a cells collection. The role of the calculated members is to offer a place where to be put the calculating results; the simplest form of a calculated member is represented by a member of a dimension and a calculating formulae which refers to that member. A calculated member has three components:

- ✓ *Identifier calculated member*, which supposes the establishing of the name, the dimension and of the hierarchical position for the specified member;
- ✓ *The calculating formulae of the calculated member*, with its help we can calculate;
- ✓ *The optional properties*, which can refer to the supplementary calculation and other types of information.

A calculated member is introduced into the interrogation before the SELECT clause, through the indicative WITH. The member has to be associated with a cube dimension, which is the *name member* will also contain the name of the dimension to which the member belongs.

The general syntax is the following:

```
MEMBER <name_member>           AS           <formulae_member>
[,<supplemetary_properties>]
```

The defining of a member by using the WITH clause within an MDX interrogation makes it available inside the interrogation, but it is not visible from any other interrogations. The calculated members focus on three types of domains or levels: the domain of the current interrogation (*query scope*); the domain of the user session (*session scope*); and the global domain of the cube (*global scope*).

## Conclusions

The actual decisional process bases on the OLAP models. The OLAP instruments have a greater and greater ability to define the way of defining a variable. Ideally, an OLAP instrument should allow an implicit format of a variable display; it should be associated to the variable.

The interrogation will precede the results and the way of presentation has to take into account the user's needs. The decision makers have some expectations connected to the final format of the presentations. Once the calculated members



have been defined and calculated, the used software programs have to export the data for visualizing. Many programs developers create applications which are able to import these types of resulted data and also display the final data in more and more attractive and intuitive formats. The design of the final reports assures a great part of the intelligent solution. Such a solution is offered by the Microsoft Excel 2010, through PivotTable and PivotChart.

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## **BOOK REVIEWS**



**CONSTANTIN POPESCU**  
**Life like Tragic Optimism – An Ecolonomic Perspective**  
ASE Publishing House, Bucharest, 2011

The distinguished Professor PhD Constantin Popescu from the Academy of Economic Studies in Bucharest, who has accustomed us with a new approach in the field of the economic sciences, moving the focus from the purely material aspects of the human activity to the holistic ones, wrote a new book issued in 2011 by the well-known ASE Bucuresti Publishing House. The book is entitled “Life like tragic optimism – an ecolonomic perspective.”

As the title indicates, this is a book about life and its optimism, considered somehow tragic by an economist, who has been concerned for years with the balanced economic growth, based on production functions, rigorous from a mathematic point of view, and has done it successfully. How do we explain Professor Constantin Popescu’s new approach?

As any other science, the economic science has its limits and the ones trying to overcome them are fervently looking for research hints in other sciences, hints that could add perspective to their quest.

From the very beginning, medicine was one of the sciences that have inspired economists, along with the mechanics and the physics. Let us remember the fact that the economic circuit is similar to the blood circuit. Towards the end of the 20<sup>th</sup> century, the similarities between the two fields have been consolidated focusing on the nervous system, including the rational and the irrational features, highlighting the role of emotions and feelings in the decision-making process. We hear the terms neuroeconomics and psychoeconomics more often lately. In the same context we include the research of the author, leading to what he calls “ECOLONOMICS” and to which he has also dedicated a hymn (4<sup>th</sup> page of the book). I quote one line from this hymn only to stimulate your interest: “Ecolonomics means love: accomplish it in order to heal the man.”

The book addresses a new theory, if we can call it this way, the theory of the “living whole” and life is the most important part of this whole, as an expression of the systemic wisdom of this complex environment.

Based on advanced interdisciplinary and transdisciplinary studies, Professor Constantin Popescu has managed to synthesize a new paradigm expressed by “integrated whole”, analyzing economics as a living body, as part of ecology, calling it ecolonomics.

I confess that while going through this book I warmly recommend, I had the feeling that the author replaces the well-known picture of economics represented by economists through demand and supply curves, by a new one reflecting this field rather as work and love intertwining, meaning living in harmony with the micro and macro-universe, than demand and supply crossing. In lieu of the alleged invisible hand abusively invoked by some economists, Professor Constantin Popescu tackles the homeostasis of the living system (ecology), with inputs,

transformations and outputs, in close connection with the other systems developed or not by man.

This perspective on economics, in which life, in all its complexity, must be the focus, as being a unique and irreversible experience in this world of transition, entitles us to claim that Professor Constantin Popescu, my former chair fellow, initiates a new approach of the economic science, based not only on the apparent and immediate profit, but also on the integrated whole benefit in which life translates in wisdom, harmony, knowledge, ecology, rationality, hope, faith, spirituality, culture and love.

Şimon Ilie, Professor Ph.D.

12.12.2011

**MIROSLAV N. JOVANOVIĆ**

**Evolutionary Economic Geography. Location of Production in the European Union**

Routledge Studies in Global Competition, Oxford, UK, 2009

ISBN: 9780203893180

The book tries to answer the problem of locating production of a company in the geographic space analyzing what determines productivity differences between regions using the theory of evolutionary economic geography. Evolutionary economics studies “the origin, change, direction and speed in the spatial distribution and organization of as well as production and consumption in a certain period of time.”

The studied problem is relevant in order to know not only what will be the future location of jobs, their quality and quantity but also where will take place the maximization of profits, the collection of taxes, the public spending, etc.

The work is addressed, as the author mentions, to a wide audience of economists: scholars, policy makers and businessmen, who face extreme challenges in the context of liberalization of various economic imbalances, the uncertainty and the latest technological advances resulting in changes in the demand. The book is also sufficiently approachable for a less specialized audience and due to its case studies it is easy to go through it and to remember the essences and the mechanisms of the processes that it describes. Nevertheless, the structure of the chapters and subchapters is not as clear.

The whole logical course of the book is supported by examples of strategic decisions taken by several leading transnational companies, of economic policies of several countries of the world and of historical events. All of them can provide conclusions about the location chosen for investments: what type of regions were chosen, which influenced the decision, when is location in a more concentrated or isolated area preferred and what results were produced for both the investor and the general welfare of the area. The argumentation uses a multidisciplinary framework, making parallels between economics and geography, physics, history, biology and art.

Miroslav Jovanovic, the author of the book, is an economist at the Transport Division of the United Nations Economic Commission for Europe based in Geneva. His academic interests have resulted in numerous articles and books in the fields of international economic integration, geography and evolutionary economics, European Union spatial location of firms and the economy, industrial policy and trade and foreign direct investments. The experience gained during the three years working at the Library of Transnational Corporations belonging to the UN, along with John H. Dunning in the early 1990s, drew the main lines in his academic career. He is professor of economics at the European Center for Peace and Development of the United Nations University in Belgrade and he teaches European Union Economic Policy at the University of Geneva.

The book’s preface comprises a balanced criticism made by Ron Boschema, regional economics professor and manager of the Urban and Regional Research Center in Utrecht, who finds the undeniable utility of the examples offered by the

author, but observes that not all of them describe what economic geography evolutionary means, and conclusions are not reflected in the provision of practical policy solutions.

The book is structured into six chapters: Introduction, Theory, Regional policy, Market structure and location of production, International companies and Conclusions. In the introduction is stated the first question that the book seeks to answer: why do some regions grow faster than others. Responses are provided through the evolutionary theory of economic geography, an area recently emerged and still very far from being fully explored. Moreover, the author, Miroslav Jovanovic, is one of the few scholars in the field.

The issue of the company's location in space arises only in case of imperfect markets, like any real market is. If there were no economies of scale and no transportation costs, the location decision would be clear. A neoclassical model, however, concerns the overall balance, while an evolutionary model implies an evolving process due to imbalance and uncertainty. To answer the problem of location in terms of evolutionary theory, multidisciplinary approach is needed, which makes the challenge accessible to just a few specialists.

The second chapter outlines the historical development, sketches the theory and provides a definition of the concept of evolutionary economic geography. It also stresses the differences between this theory and previous economic theories that have offered explanations regarding the location of firms. It argues the idea that this new theory provides more realistic and more general valid explanation in the field comparing to the neoclassical equilibrium theory.

The branch of evolutionary economic geography arose along with the recognition by the specialists of the importance of cooperation between geographers and economists, in the early 1990s. They previously considered that their fields of expertise are completely different and do not influence each other. The cooperation initiative belonged to economists manifested in the first publications were in the newly defined branch: The Oxford Handbook of Economic Geography (2000) by Clark, Gertler and Feldman and launch of the Journal of Economic Geography in 2001. It is considered that the theory has its origins in the model of David Ricardo's comparative advantage. Formation of regional clusters of firms is a phenomenon that began to be studied in the 1990s. They are determined by the possibility of obtaining economies of scale, imperfect competition and competition for limited resources, business connections (proximity to suppliers and customers, availability of intermediate goods), the multiple equilibrium (centripetal and centrifugal forces) and expectations.

In the choice of the location for investments, there are taken into consideration several determinants that are separated by the author into five categories according to the types of stakeholders that take part to the process. Firstly there are the costs attributed to specific locations by the suppliers or by the location itself (regarding the availability, interchangeability, quality and prices of inputs, market access costs, transport costs, availability of financial resources and project costs). Secondly, the demand side can influence the location decision through the size and growth potential of the market and the type of preferences of



the consumers. The third type of factors consists in the organization and technology, meaning the production linkages between inputs and outputs, the competition, the technology and its life cycle and the local resources of research and development. In the last two categories, there are the political and social factors, which can influence the location decision through taxes, subventions, public acquisitions, exchange rates, standardization, unions, on one side, and education, bureaucracy, the skills of the workers, income distribution, general quality of life and retirement conditions, on the other side.

Under the neoclassical theory, on an imperfect market, a company seeks either to minimize the costs, or to maximize the profits. In fact, more often, companies follow a mixed strategy, situation that is studied by the evolutionary theory.

In this second chapter, we find how the evolutionary theory has evolved marking the links created throughout the years, between economics and other sciences. The author succeeded to make a rigorous description of the similarities and differences between neoclassicism and evolutionary theory. There is a significant amount of realism and applicability in the evolutionary theory that distinguishes it from neoclassicism. The more idealistic doctrine sustains the purpose of eliminating the market imperfections, which proved to be, in successive cases, not only impossible but also undesirable, because it is often an appealing opportunity to take advantage of these flaws.

The third chapter comprises a comprehensive criticism of the regional policy adopted in the past years by the European Union. Including measures that mainly influence the supply, the regional policy had hardly had positive results. Explaining the instruments through which and the reason why the state, in the virtue of this policy, implies in regional problems, the author lets the reader wonder how the productive potential can be influenced and what determines the success of such policies. The decision regarding the costs of regional adjustment, the time interval on which the policy is applied and the length of its effects are crucial for regional development. The experience of the European Union has proved that a coordination of all the state policies and the authorities is a key aspect in all the policies' achievements. An example, which contradicts the theory that says that only central regions might be successful, is the case of Ireland and Finland in Europe or Australia and Japan in the rest of the world.

In the fourth chapter the author describes the determinants of the location decision of investors and the mechanism of the process. These are considered to belong to the market structure and they are classified in as follows: competition, innovation, the size of the local market, the inter-industry trade, mergers and acquisitions, standardization and non-tariff barriers.

The fifth chapter introduces several other reasons for choosing a location for investments: cultural differences, positive and negative externalities brought by the market, the absorption capacities of new technologies, the labor productivity of the local workers, the cost of capital transfer, the relation that can be observed between the existing foreign and local companies, entry and exit barriers, the social responsibility of the companies, state intervention on the market, national and

international laws, all of these keeping in mind the organization of the company. Synthesizing, a company should compare the local advantages for investments, the competitive advantage of the competitors and its own.

The book received criticism for the lack of solutions it provides, although the author has settled as a main goal just to clarify and explain the main trends in the area of evolutionary economic geography.

In the end, the author himself concludes that the book could not provide the answer to the question: what determines the competitiveness of a region.

The most important and the longest chapter is the one about the theory of evolutionary economic geography, containing many ideas already deepened by other authors. However, the book is a consistent effort to synthesize ideas, concepts and case studies from a wide variety of scientific fields in order to describe the picture of evolutionary economic geography.

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